

L.H. 259

AWARD/CONTRACT		1. THIS CONTRACT IS A RATED ORDER UNDER DPAS (15 CFR 350)		ATING	PAGE 1 OF 203
2. CONTRACT (Proc. Inst. Ident.) NO. DE-AM26-99FT40139		3. EFFECTIVE DATE 6/1/99		4. REQUISITION/PURCHASE REQUEST PROJECT NO. 26-99FT40139.000	
5. ISSUED BY U. S. DEPARTMENT OF ENERGY FEDERAL ENERGY TECHNOLOGY CENTER P.O. BOX 880, MS 107 MORGANTOWN, WV 26507-0880		CODE		6. ADMINISTERED BY (If other than Item 5) ACQUISITION AND ASSISTANCE DIVISION DAVID BERKEY: AC (304) 285-4990 - DBERKE@FETC.DOE.GOV	

7. NAME AND ADDRESS OF CONTRACTOR (No., street, city, county, State, and ZIP Code) D. N. AMERICAN 1000 Technology Drive, Suite 3220 Fairmont, WV 26554		8. DELIVERY <input type="checkbox"/> FOB ORIGIN <input type="checkbox"/> OTHER (See below)
		9. DISCOUNT FOR PROMPT PAYMENT N/A

CODE	FACILITY CODE	10. SUBMIT INVOICES (4 copies unless otherwise specified) TO THE ADDRESS SHOWN IN:	SEE PART I - CLAUSE G.2
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11. SHIP TO/MARK FOR SEE PART I - SECTION D	CODE	12. PAYMENT WILL BE MADE BY SEE CLAUSE G.2	CODE
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13. AUTHORITY FOR USING OTHER THAN FULL AND OPEN COMPETITION: <input type="checkbox"/> 10 U.S.C. 2304(c)() <input checked="" type="checkbox"/> 41 U.S.C. 253(c)(5)	14. ACCOUNTING AND APPROPRIATION DATA
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15A. ITEM NO.	15B. SUPPLIES/SERVICES	15C. QUANTITY	15D. UNIT	15E. UNIT PRICE	15F. AMOUNT
1.	Comprehensive Information Processing Services (CHIPS)	See Part I - Section B	See Part I - Section B	See Part I - Section B	See Part I - Section B
2.	Reports				

15G. TOTAL AMOUNT OF CONTRACT	\$16,324,805 (EST.)
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CONTRACTING OFFICER WILL COMPLETE ITEM 17 OR 18 AS APPLICABLE

17. <input checked="" type="checkbox"/> CONTRACTOR'S NEGOTIATED AGREEMENT (Contractor is required to sign this document and return 3 copies to Issuing office.) Contractor agrees to furnish and deliver all items or perform all the services set forth or otherwise identified above and on any continuation sheets for the consideration stated herein. The rights and obligations of the parties to this contract shall be subject to and governed by the following documents: (a) this award/contract, (b) the solicitation, if any, and (c) such provisions, representations, certifications, and specifications, as are attached or incorporated by reference herein. (Attachments are listed herein.)	18. <input type="checkbox"/> AWARD (Contractor is not required to sign this document.) Your offer on Solicitation Number _____ including the additions or changes made by you which additions or changes are set forth in full above, is hereby accepted as to the items listed above and on any continuation sheets. This award consummates the contract which consists of the following documents: (a) the Government's solicitation and your offer, and (b) this award/contract. No further contractual document is necessary.
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19A. NAME AND TITLE OF SIGNER (Type or print) NITESH S. PATEL PRESIDENT	20A. NAME OF CONTRACTING OFFICER Randolph L. Kesling
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19B. NAME OF CONTRACTOR By <u>Nitesh S. Patel</u> (Signature of person authorized to sign)	19C. DATE SIGNED 5/18/99	20B. UNITED STATES OF AMERICA By <u>Randolph L. Kesling</u> (Signature of Contracting Officer)	20C. DATE SIGNED 5/19/99
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SECTION B - SUPPLIES OR SERVICES AND PRICES/COSTS

B.1 SERVICES BEING PROCURED

The contractor shall furnish all personnel, equipment, material, supplies and services except as may be expressly set forth in this contract as furnished by the Government and otherwise do all things necessary for, or incident to the performance and providing of the following items of work:

- Item 1 -** Information Processing Services support for the Federal Energy Technology Center, fixed rate level of effort for accomplishing Tasks 11.1 through 11.5 of Section J, Attachment A, Statement of Work. The prices listed below reflect the sum of the contractors labor schedule at Attachment C.

BASE PERIOD - EFFECTIVE DATE OF CONTRACT THROUGH 24 MONTHS

Year 1 - \$2,802,069.00
Year 2 - \$2,869,557.00
Total - \$5,671,626.00

OPTION YEAR I - MONTHS 25 THROUGH 36

\$2,941,532.00

OPTION YEAR II - MONTHS 37 THROUGH 48

\$3,016,422.00

OPTION YEAR III - MONTHS 49 THROUGH 60

\$3,094,084.00

60 Months Grand TOTAL= \$14,723,664.00

- Item 2 -** Information Processing Services support for the Federal Energy Technology Center in response to specific task orders issued under contract clause H.8 "ORDERING PROCEDURE".

Total amount not to exceed 50% of the value of Item 1 above for the period in which the task is issued. Pricing for individual tasks shall be in accordance with Article B.3 below.

Item 3 -

PERIOD

ESTIMATED FEE POOL

Base Period
Effective date of
Contract through
24 months

OPTION YEAR I

12 Months \$ _

OPTION YEAR II

12 Months \$ _

OPTION YEAR III

12 Months \$ _

TOTAL: \$ _

Item 4 -

Other Direct Costs, including but not limited to training, travel, and incidentals estimated at _____ Prior written approval of the COR is required. Estimated:

Item 5 -

Reports, as prescribed in accordance with Section J, Attachment B "Reporting Requirements Checklist" - Not separately Priced

B.2 TYPES OF TASK ORDERS

(a) General Contract Information:

The contract to be awarded will be primarily a fixed rate performance incentive type under which work will be initiated in response to Task Orders issued by the Government. The nature of the work will be as described in the five (5) basic services or tasks listed in the Statement of Work (SOW). See Clause H.8 "Ordering Procedure" which outlines the task request and issuance process.

Task Orders issued under this contract may be fixed rate or fixed price as described below.

(b) Fixed Rate Task Orders:

Task orders may be issued to require the contractor to provide Direct Productive Labor Hours (DPLH) toward accomplishment of a specific task (or tasks), from the labor categories set forth in this contract at the firm fixed labor hour rates indicated in Section J, Attachment C. Other Direct Costs (ODC) and travel costs required for performance of the task order will be identified and proposed with each specific task order proposal. Other direct costs and travel incurred in the performance of fixed rate task orders shall be reimbursed to the contractor at actual reasonable costs in accordance with Subpart 31.2 of the Federal Acquisition Regulation (FAR) in effect on the date of this contract.

The contractor shall not exceed the total not to exceed (NTE) value for a task order without the approval of the Contracting Officer. If the contractor reaches the total NTE for a task order without completing the required task, the Contracting Officer may increase the total estimated cost and require the contractor to continue work until the task is completed, or the new total estimated cost is reached. The Government shall not reimburse the contractor for any costs incurred in excess of the task order ceiling.

Other direct costs and travel incurred in the performance of fixed rate task orders shall be reimbursed to the contractor at actual reasonable costs in accordance with Subpart 31.2 of the Federal Acquisition Regulation (FAR) in effect on the date of this contract.

(c) Firm Fixed Price Task Orders:

Task orders for "on request" work may be issued to require the contractor to complete a specific task (or tasks), for a firm fixed price. The contractor's task order proposal for firm fixed price task orders shall include DPLH in accordance with the labor categories set forth in Section J, Attachment C. The contractor may elect to use the firm fixed labor hour rates set forth in Section J, Attachment C, or establish lower rates for proposals submitted in response to a firm fixed price task order. ODC and travel costs required for performance of the task order shall be included in each specific task order proposal and profit. The Government may include specific performance incentives for firm fixed price task orders.

Firm fixed price task orders may be employed per H.8 for "completion" type projects. The rates at Section J, Attachment C will be applied for task proposals. The contractor's compensation for fixed price orders will not vary with the contractor's actual cost experience.

B.3 OPTIONS TO EXTEND THE TERM OF THE CONTRACT SERVICES

- (a)** The Government may unilaterally extend the term of this contract by written notice to the contractor within the term of the contract, provided that the Government shall give the contractor a preliminary written notice of its intent to extend at least sixty (60) days before the contract expires. The preliminary notice does not commit the Government to an extension.
- (b)** If the Government exercises any option, the extended contract shall be considered to include this option provision. The extension of the contract under any option, if exercised, shall be for an additional term of twelve (12) months.
- (c)** The total duration of this contract, including the exercise of any options under this clause, shall not exceed sixty (60) months.

B.4 MINIMUM AND MAXIMUM QUANTITY

The guaranteed minimum to be ordered under this contract is the dollar value of task orders issued for the Statement of Work in paragraph 11.0 within the base period of twenty-four (24) months. A maximum quantity is specified as the B.1 prices times a factor of 1.5.

SECTION C - DESCRIPTION/SPECIFICATIONS/WORK STATEMENT

C.1 STATEMENT OF WORK

The Statement of Work is located in Section J, Attachment A to this contract.

C.2 REPORTING REQUIREMENTS

Reports under this contract shall be in accordance with the Reporting Requirements set forth in Section J, Attachment B, "Reporting Requirements Checklist".

SECTION D - PACKAGING AND MARKING

D.1 PACKAGING

Preservation, packaging, and packing for shipment or mailing of all work delivered hereunder shall be in accordance with good commercial practice and adequate to insure acceptance by common carrier and safe transportation at the most economical rate(s).

Reports deliverable under this contract shall be mailed by other than first-class mail, unless the urgency of the deliverable sufficiently justifies the use of the premium method of delivery.

D.2 MARKING

Each package, report or other deliverable shall be accompanied by a letter or other document which:

- (1) Identifies the contract by number under which the item is being delivered.
- (2) All deliverables under this contract shall be titled in accordance with the Reporting Requirements Checklist located in Section J, Attachment B.
- (3) Indicates whether the contractor considers the delivered item to be a partial or full satisfaction of the requirement.

SECTION E - INSPECTION AND ACCEPTANCE

E.1 INSPECTION (JUL 1991)

Inspection of all items under this contract shall be accomplished by the DOE Contracting Officer's Representative (COR), or any other duly authorized Government representative.

E.2 ACCEPTANCE (NOV 1997)

Acceptance of all work and effort under this contract (including "Reporting Requirements," if any) shall be accomplished by the Contracting Officer, or any duly designated representative.

SECTION F - DELIVERIES OR PERFORMANCE

F.1 PERIOD OF PERFORMANCE

The base period of performance (including the transition period) is twenty-four(24) months from the date of contract execution.

If the Government elects to exercise the options specified in Clause B.4, "Options to Extend the Term of the Contract Services - Items 1 and 2", the period of performance will be extended as follows:

Option Year 1 - Twelve (12) months

Option Year 2 - Twelve (12) months

Option Year 3 - Twelve (12) months

from the effective date of exercise of the respective option.

F.2 PRINCIPAL PLACE OF PERFORMANCE

The principal place of performance under this contract shall be at the Department of Energy (DOE) Federal Energy Technology Center (FETC) facilities located at 3610 Collins Ferry Road, Morgantown, West Virginia, and at 626 Cochrans Mill Road, Pittsburgh (i.e., Bruceton, South Park Township), Pennsylvania.

SECTION G - CONTRACT ADMINISTRATION DATA

G.1 CORRESPONDENCE PROCEDURES

To promote timely and effective administration, correspondence (except for invoices and reports) submitted under this contract shall be subject to the following procedures:

(a) Technical Correspondence.

Technical correspondence (as used herein, this term excludes technical correspondence where patent or technical data issues are involved and correspondence which proposes or otherwise involves waivers, deviations, or modifications to the requirements, terms, or conditions, of this contract) shall be addressed to the DOE Contracting Officer's Representative, with an information copy of the correspondence to the DOE Contract Specialist.

(b) Property Correspondence.

Property correspondence (as used herein, this term includes correspondence which addresses matters which relate to property issues which come under the contract's Government property provisions) shall be addressed to the DOE Property Administrator, with information copies of the correspondence to the DOE Contracting Officer's Representative and the DOE Contract Specialist.

(c) Correspondence on Patent or Technical Data Issues.

Correspondence concerning patent or technical data issues shall be addressed to the Intellectual Property Law Division, U.S. Department of Energy, Chicago Operations Office, 9800 South Cass Avenue, Building 201, Argonne, IL 60439.

Information copies of correspondence being sent to the Intellectual Property Law Division shall also be sent to the FETC Patent Attorney, the DOE Contract Specialist, and the Contracting Officer's Representative.

(d) Other Correspondence.

All other correspondence shall be addressed to the DOE Contract Specialist with information copies of the correspondence to the DOE Contracting Officer's Representative.

(e) Subject Line(s).

All correspondence shall contain a subject line commencing with the contract number, i.e., DE-AC26-99FT40139, and identifying the specific contract action requested.

G.2 SUBMISSION OF VOUCHERS/INVOICES

(a) Voucher Form (SF 1034)

In requesting reimbursement, contractors shall use Standard Form 1034 (Public Voucher for Purchases and Services Other Than Personal), and the FETC Statement of Cost. The Statement of Cost shall be supported by the information contained in Paragraph C of this clause and shall provide, as a minimum, a breakout by line item, task, and subtask order for the current billing period and cumulatively for the entire contract. Acceptable substitutes for the forms (which provide the same necessary information) may be used.

In accordance with FAR 52.232-25, "Prompt Payment," all invoices shall include the following information:

- (1) Name and address of contractor/vendor
- (2) Invoice date
- (3) Contract number or other authorization for delivery of property or services
- (4) Description, price and quantity of property and services actually delivered or rendered

- (5) Shipping and payment terms
- (6) Name (where practicable), title, phone number and complete mailing address of responsible official to whom payment is to be sent (must be the same as that in the contract or in a proper notice of assignment)
- (7) Name (where practicable), title, phone number and complete mailing address of the person to be notified in the event of a defective invoice.
- (8) Other substantiating documentation or information as required by the contract.

(c) Submission of Voucher.

Submit one copy of the original voucher including the certified Statement of Cost and Supporting Documentation to the following payment office:

U. S. Department of Energy
Oak Ridge Financial Services Center
P. O. Box 4787
Oak Ridge, TN 37831

In addition, submit two copies of the voucher including the certified Statement of Cost and Supporting Documentation to the following address:

U. S. Department of Energy
Federal Energy Technology Center
Attn: David Berkey
P. O. Box 880, MS 107
Morgantown, WV 26507-0880

(d) Billing Period.

Vouchers shall be submitted no more frequently than monthly (unless prior written consent of the Contracting Officer for more frequent billing is obtained). The period of performance covered by vouchers should be the same as covered by any required monthly technical progress reports and/or monthly cost reports.

(e) Payment Method.

In accordance with Mandatory Information for Electronic Funds Transfer Payment, payment under this contract will be made utilizing the Automated Clearing House (ACH) network. The payment system is specifically referred to as "Vendor Express."

(f) Defective Invoices.

Invoices that are determined to be defective, and therefore not suitable for payment, shall be returned to the contractor as soon as practicable, specifying the reason(s) why the invoice is not proper.

G.3 DOE PATENT COUNSEL

Correspondence concerning patent or technical data issues shall be addressed to the following:

Intellectual Property Law Division
U.S. Department of Energy
Chicago Operations Office
9800 South Cass Avenue
Building 201
Argonne, IL 60439

Information copies of correspondence being sent to the Intellectual Property Law Division shall be sent to the Contracting Officer, designated COR, and the Patent Attorney at the following address:

U. S. Department of Energy
Federal Energy Technology Center
ATTN: Patent Attorney, MS-A03
P. O. Box 880
Morgantown, WV 26507-0880

SECTION H - SPECIAL CONTRACT REQUIREMENTS

H.1 CONSECUTIVE NUMBERING

Due to automated procedures employed in formulating this document, clauses and provisions contained within may not always be consecutively numbered.

H.2 KEY PERSONNEL/CONTRACTOR PROJECT MANAGER

The key personnel, which includes the Contractor Project Manager, specified below, are considered to be essential to the work being performed under this award; moreover, any changes to these personnel require prior DOE Contracting Officer's written approval.

The Contractor Project Manager shall serve as the contractor's authorized supervisor for technical and administrative performance of all work hereunder. The Contractor Project Manager shall receive and execute, on behalf of the contractor, such technical directions as the DOE Contracting Officer's Representative may issue within the terms and conditions of the contract.

The following is a list of key personnel that have been approved for this contract:

<u>Name</u>	<u>Position</u>
	Project Manager
	Task Lead 1
	Task Lead 2
	Task Lead 3
	Task Lead 4
	Task Lead 5

Prior to diverting any of the specified individuals, the contractor shall notify the Contracting Officer not less than thirty (30) calendar days prior to the diversion or substitution of key personnel and shall submit a written justification (including qualifications of proposed substitutions) to permit evaluation. The proposed changes will be approved in writing at the sole discretion of the Contracting Officer, with concurrence of the Contracting Officer's Representative.

H.3 CONFIDENTIALITY OF INFORMATION

- (a) To the extent that the work under this contract requires that the contractor be given access to confidential or proprietary business, technical, or financial information belonging to the Government or other companies, the contractor shall, after receipt thereof, treat such information as confidential and agree not to appropriate such information to its own use or to disclose such information to third parties unless specifically authorized by the Contracting Officer in writing. The foregoing obligations, however, shall not apply to:
- (1) Information which, at the time of receipt by the contractor, is in the public domain;
 - (2) Information which is published after receipt thereof by the contractor or otherwise becomes part of the public domain through no fault of the contractor;
 - (3) Information which the contractor can demonstrate was in his possession at the time of receipt thereof and was not acquired directly or indirectly from the Government or other companies;
 - (4) Information which the contractor can demonstrate was received by it from a third party who did not require the contractor to hold it in confidence.
- (b) The contractor shall obtain the written agreement, in a form satisfactory to the Contracting Officer, of each employee permitted access, whereby the employee agrees that he will not discuss, divulge or disclose any such information or data to any person or entity except those persons within the contractor's organization directly concerned with the performance of the contract.

- (c) The contractor agrees, if requested by the Government, to sign an agreement identical, in all material respects, to the provisions of this clause, with each company supplying information to the contractor under this contract, and to supply a copy of such agreement to the Contracting Officer. From time to time upon request of the Contracting Officer, the contractor shall supply the Government with reports itemizing information received as confidential or proprietary and setting forth the company or companies from which the contractor received such information.
- (d) The contractor agrees that upon request by DOE it will execute a DOE-approved agreement with any party whose facilities or proprietary data it is given access to or is furnished, restricting use and disclosure of the data or the information obtained from the facilities. Upon request by DOE, such an agreement shall also be signed by contractor personnel.
- (e) This clause shall flow down to all subcontracts.

H.4 WAGE RATE DETERMINATION

Service Contract Act wage rate determinations applicable to this contract are:

Wage Rate Determination

94-2451, Rev. 12 dated January 12, 1999 (PGH)
94-2573, Rev. 11 dated September 21, 1998 (MGN)

H.5 REPRESENTATIONS, CERTIFICATIONS AND OTHER STATEMENTS OF THE OFFEROR

The Representations, Certifications and Other Statements of the Offeror for this contract are hereby incorporated by reference.

H.6 PREFERENCE IN HIRING

With the exception of managerial personnel, the contractor, in performing this contract, agrees to give preference in hiring to qualified incumbent contractor personnel.

H.7 AUTOMATIC DATA PROCESSING EQUIPMENT (ADPE) LEASING

- (a) If the contractor leases ADPE equipment for use under this contract, the contractor shall include a provision in the rental contract stating that the Government shall have the unilateral right to exercise any purchase option under the rental contract between the contractor and the ADPE equipment vendor and to realize any other benefits earned through rental payments.
- (b) The contractor shall furnish a copy of the rental contract to the Contracting Officer under the terms of this provision.

H.8 ORDERING PROCEDURE

Performance under this contract shall be subject to the following ordering procedures:

- (a) The Contracting Officer will issue a Task Proposal Request to the contractor identifying as applicable:
 - (1) The Task Order Statement of Work;
 - (2) The desired schedule of performance;
 - (3) Required travel and ODC's;
 - (4) Deliverables and required delivery dates;
 - (5) Government-furnished property;
 - (6) Special instructions;

- (7) Place of Performance;
 - (8) Not-To-Exceed Price or Firm Fixed price
 - (9) Inspection and Acceptance for Firm Fixed Price;
 - (10) Fund Citation.
 - (11) Type of Task Order; Fixed Rate or Firm Fixed Price
- (b) The contractor shall provide its task proposal within five working days of receipt of the Task Proposal Request, unless otherwise specified by the Contracting Officer.
- (c) The contractor's task proposal shall consist of the following information:
- (1) Direct Productive Labor Hours (DPLH) by labor category on a monthly basis, including overtime (if authorized), and total DPLH, including subcontractor and consultant DPLH, if applicable;
 - (2) Travel and ODCs
 - (3) Estimated subcontractors and consultants costs, including DPLH if applicable;
 - (4) Estimated computer time and cost, if applicable;
 - (5) Other pertinent information (e.g. inter-divisional transfers);
 - (6) Total firm fixed price or not-to exceed ceiling;
 - (7) Any proposed revision to the schedule of performance; and
 - (8) Information responsive to any special instructions in the Task Proposal Request, such as incentive arrangements pertinent to that Task, etc.
- (d) Labor rates proposed by the contractor shall not exceed the rates set forth in the Section J Attachment.
- (e) Task Proposal requests and Task Orders will be issued in writing, unless otherwise authorized by the Contracting Officer.
- (f) Task Orders may be issued on a unilateral basis.

H.9 TECHNICAL DIRECTION

- (a) Performance of the work under this contract shall be subject to the technical direction of the Contracting Officer's Representative (COR) identified elsewhere in this contract. The term "technical direction" is defined to include, without limitation:
- (1) Directions to the contractor which redirect the contract effort, shift work emphasis between work areas or tasks, require pursuit of certain lines of inquiry, fill in details or otherwise serve to accomplish the contractual Statement of Work.
 - (2) Provision of written information to the contractor which assists in the interpretation of drawings, specifications or technical portions of the work description.
 - (3) Review and, where required by the contract, approval of technical reports, drawings, specifications and technical information to be delivered by the contractor to the Government under the contract.

- (b) Technical direction must be within the scope of work stated in the contract. The COR does not have the authority to, and may not, issue any technical direction which:
 - (1) Constitutes an assignment of additional work outside the Statement of Work;
 - (2) Constitutes a change as defined in the contract clause entitled "Changes";
 - (3) In any manner causes an increase or decrease in the total price or the time required for contract performance;
 - (4) Changes any of the expressed terms, conditions or specifications of the contract; or
 - (5) Interferes with the contractor's right to perform the terms and conditions of the contract.
- (c) All technical directions shall be issued in writing by the COR.
- (d) The contractor shall proceed promptly with the performance of technical directions duly issued by the COR in the manner prescribed by this article and within his authority under the provisions of this clause. If, in the opinion of the contractor, any instruction or direction by the COR falls within one of the categories defined in (b)(1) through (5) above, the contractor shall not proceed but shall notify the Contracting Officer in writing within five (5) working days after receipt of any such instruction or direction and shall request the Contracting Officer to modify the contract accordingly. Upon receiving the notification from the contractor, the Contracting Officer shall:
 - (1) Advise the contractor in writing within thirty (30) days after receipt of the contractor's letter that the technical direction is within the scope of the contract effort and does not constitute a change under the "Changes" clause of the contract; or
 - (2) Advise the contractor within a reasonable time that the Government will issue a written change order.
- (e) A failure of the contractor and Contracting Officer to agree that the technical direction is within the scope of the contract, or a failure to agree upon the contract action to be taken with respect thereto, shall be subject to the provisions of the clause entitled "Disputes" of the contract.

H.10 MODIFICATION AUTHORITY

Notwithstanding any of the other provisions of this contract, the Contracting Officer shall be the only individual authorized to:

- (a) accept nonconforming work,
- (b) waive any requirement of this contract, or
- (c) modify any term or condition of this contract.

H.11 GOVERNMENT PROPERTY AND DATA

- (a) Except as otherwise authorized by the Contracting Officer in writing, the contractor is not authorized to acquire as a direct charge item under this contract any equipment (including office equipment), furniture, fixtures or other personal property items.
- (b) Acquisition Authorization Requirements
 - (1) In the course of performance of this contract, the contractor may only acquire and direct charge to this contract such items identified in Section J, Attachment I.
 - (2) The contractor may request authorization for acquisition of additional items from the Contracting Officer. Any such request shall include an analysis of the most economical

method of acquisition (e.g., lease versus purchase) and shall describe the material equity arising from any proposed lease arrangement, such as option credits.

(3) Any changes in the acquisition authorization shall be reflected in a modification to this contract which revises the List of Government Property in Section J, Attachment I, shall be furnished.

(4) Authorization to acquire does not constitute consent to the placement of a subcontract.

(c) Government-Furnished Property and Data.

Except as otherwise authorized by the Contracting Officer in writing, only that property and data specifically included in Section J Attachment I or as specified in task orders, shall be furnished.

H.12 SUBCONTRACTS

(a) Prior to the placement of subcontracts and in accordance with the "Subcontracts" clause in Section I, the contractor shall ensure that:

(1) they contain all of the clauses of this contract (altered when necessary for proper identification of the contracting parties) which contain a requirement for such inclusion in applicable subcontracts. Particular attention should be directed to the potential flowdown applicability of the clauses entitled "Utilization of Small Business Concerns and Small Disadvantaged Business Concerns" and "Small Business and Small Disadvantaged Business Subcontracting Plan" contained in Section I of the contract;

(2) any applicable subcontractor Certificate of Current Cost or Pricing Data (see FAR 15.804-2) and subcontractor Representations and Certifications (see Section K, and the document referenced in the clause entitled "Representations, Certifications and Other Statements of the Offeror" contained in this Section H) are received; and

(3) any required prior notice and description of the subcontract is given to the Contracting Officer and any required consent is received. Except as may be expressly set forth therein, any consent by the Contracting Officer to the placement of subcontracts shall not be construed to constitute approval of the subcontractor or any subcontract terms or conditions, determination of the allowability of any cost revision of this contract or any of the respective obligations of the parties thereunder, or creation of any subcontractor privity of contract with the Government.

(b) Prior to the award of any subcontracts for advisory and assistance services, the contractor shall obtain from the proposed subcontractor, the disclosure required by 48 CFR (DEAR) 909.507-1, and shall determine in writing whether the interests disclosed present an actual or significant potential for an organizational conflict of interest, in accordance with the clause contained in Section I of this contract. No work shall be performed by the subcontractor until the contractor has cleared the subcontractor for Organizational Conflicts of Interest (OCI).

H.13 SERVICES OF CONSULTANTS

(a) In addition to the provisions of the clause of this contract entitled "Subcontracts," the prior written consent of the Contracting Officer also shall be obtained:

(1) Whenever any employee of the contractor is to be reimbursed as a "consultant" under this contract; or

(2) For the utilization of the services of any consultant under this contract exceeding the daily rates of \$278, exclusive of travel costs, or

(3) Where the services of any consultant under this contract will exceed ten days in any calendar year, or exceed a total value of \$2,500.

- (b) Whenever Contracting Officer written consent is required, the contractor will obtain and furnish to the Contracting Officer information concerning the need for and selection of such consultant services and the reasonableness of the fees to be paid, including, but not limited to, whether fees to be paid to any consultant exceed the lowest fee charged by such consultant to others for performing consulting services of a similar nature.
- (c) Prior to the award of any consultant agreements for advisory and assistance services, the contractor shall obtain from the proposed consultant the disclosure required by 48 CFR (DEAR) 909.507-1, and shall determine in writing whether the interests disclosed present an actual or significant potential for an organizational conflict of interest, in accordance with the clause contained in Section I of this contract. No work shall be performed by the consultant until the contractor has cleared the consultant for Organizational Conflicts of Interest (OCI).

H.14 POSITION QUALIFICATIONS

Contractor direct labor personnel assigned to the performance of this contract shall satisfy as a minimum the applicable labor category qualifications, both education and experience, set forth in the "Position Qualifications" attachment to this contract, except as the Contracting Officer may authorize. (See Section J, Attachment E for identification of the "Position Qualifications").

H.15 FUNDING

- (a) The Task Order Schedule specifies the amount presently available for payment by the Government and allotted to this contract, and the period of performance the allotted amount will cover. The parties contemplate that the Government will allot additional funds incrementally to the contract up to the ceiling amount specified in the Schedule. The contractor agrees to perform, or have performed, work on the contract up to the point at which the total amount paid and payable by the Government under the contract approximates but does not exceed the total amount actually allotted by the Government to the contract.
- (b) The contractor shall notify the Contracting Officer in writing whenever it has reason to believe that the costs it expects to incur under this contract in the next 60 days, when added to all costs previously incurred, will exceed 75 percent of the total amount so far allotted to the contract by the Government. The notice shall state the estimated amount of additional funds required to continue performance for the period specified in the Schedule.
- (c) Sixty days before the end of the period specified in the Schedule, the contractor shall notify the Contracting Officer, in writing, of the estimated amount of additional funds, if any, required to continue timely performance under the contract or for any further period specified in the Schedule or otherwise agreed upon, and when the funds will be required.
- (d) If, after notification, additional funds are not allotted by the end of the period specified in the Schedule or another agreed-upon date, upon the contractor's written request, the Contracting Officer will terminate this contract on that date in accordance with the provisions of the Termination clause of this contract. If the contractor estimates that the funds available will allow it to continue to discharge its obligations beyond that date, it may specify a later date in its request, and the Contracting Officer may terminate this contract on that later date.
- (e) Except as required by other provisions of this contract, specifically citing and stated to be an exception to this clause-
 - (1) The Government is not obligated to compensate the contractor for DPLH or other direct items or services provided in an amount which exceeds the total amount allotted by the Government to this contract; and
 - (2) The contractor is not obligated to continue providing DPLH under this contract (including actions under the Termination clause of the contract) or incur costs in excess of the amount then allotted to the contract by the Government until the Contracting Officer notifies the contractor, in writing, that the amount allotted by the Government has been increased and

specifies an increased amount, which shall then constitute the total amount allotted by the Government to this contract.

- (f) The ceiling price shall be increased to the extent that the amount allotted by the Government exceeds the ceiling price specified in the Schedule.
- (g) No notice, communication, or representation in any form other than that specified in subparagraph (e)(2) above, or from any person other than the Contracting Officer, shall affect the amount allotted by the Government to this contract. In the absence of the specified notice, the Government is not obligated to compensate the contractor for performing any work in an amount which exceeds the total amount allotted by the Government to this contract, whether that excess amount arose during the course of the contract or as a result of termination.
- (h) When and to the extent that the amount allotted by the Government to the contract is increased, the contractor shall be entitled to compensation for DPLH and other direct items or services provided before the increase in an amount which exceeds the amount previously allotted by the Government to the same extent as if the DPLH and other direct items or services were provided afterward, unless the Contracting Officer issues a termination or other notice and directs that the increase is solely to cover termination or other specified expenses.
- (i) Change orders shall not be considered an authorization to exceed the amount allotted by the Government specified in the Schedule, unless they contain a statement increasing the amount allotted.
- (j) Nothing in this clause shall affect the right of the Government to terminate this contract. If this contract is terminated, the Government and the contractor shall negotiate an equitable distribution of all property produced or purchased under the contract, based upon the share of costs incurred by each.

H.16 PAYMENTS UNDER FIXED RATE TASK ORDERS

The Government shall pay the contractor as follows upon the submission of invoices or vouchers approved by the Contracting Officer:

- (a) Hourly Rate.
 - (1) The amounts shall be computed by multiplying the appropriate hourly rates prescribed in the Schedule by the number of direct labor hours performed. The rates shall include wages, indirect costs, and general and administrative expense, excluding profit. Fractional parts of an hour shall be payable on a prorated basis. Vouchers may be submitted once each month (or at more frequent intervals, if approved by the Contracting Officer) in accordance the provisions of Clause G.2, Submission of Vouchers/Invoices. The contractor shall substantiate vouchers by evidence of actual payment and by individual daily job time cards, or other substantiation approved by the Contracting Officer. Promptly after receipt of each substantiated voucher, the Government shall, except as otherwise provided in this contract, and subject to the terms of (c) of this section, pay the voucher as approved by the Contracting Officer.
 - (2) Unless otherwise prescribed in the Schedule, the Contracting Officer shall withhold 5 percent of the amounts due under this paragraph (a), but the total amount withheld shall not exceed \$50,000. The amounts withheld shall be retained until the execution and delivery of a release by the contractor as provided in paragraph (d) of this section.
 - (3) Unless the Schedule prescribes otherwise, the hourly rates in the Schedule shall not be varied by virtue of the contractor having performed work on an overtime basis. If no overtime rates are provided in the Schedule and overtime work is approved in advance by the Contracting Officer, overtime rates shall be negotiated. Failure to agree upon these overtime rates shall be treated as a dispute under the Disputes clause of this contract. If the Schedule provides rates for overtime, the premium portion of those rates will be reimbursable only to the extent the overtime is approved by the Contracting Officer.
- (b) Materials and Subcontracts.

- (1) Allowable costs of direct materials shall be determined by the Contracting Officer in accordance with Subpart 31.2 of the Federal Acquisition Regulation (FAR) in effect on the date of this contract. Reasonable and allocable material handling costs may be included in the charge for material to the extent they are clearly excluded from the hourly rate. Material handling costs are comprised of indirect costs, including, when appropriate, general and administrative expense allocated to direct materials in accordance with the contractors usual accounting practices consistent with Subpart 31.2 of the FAR. The contractor shall be reimbursed for items and services purchased directly for the contract only when cash, checks, or other forms of actual payment have been made for such purchased items or services. Direct materials, as used in this clause, are those materials which enter directly into the end product, or which are used or consumed directly in connection with the furnishing of the end product.
- (2) The cost of subcontracts that are authorized under the subcontracts clause of this contract shall be reimbursable costs under this clause; provided, that the costs are consistent with subparagraph (b)(3) of this section. Reimbursable costs in connection with subcontracts shall be limited to the amounts paid to the subcontractor for items and services purchased directly for the contract only when cash, checks, or other form of payment has been made for such purchased items or services; however, this requirement shall not apply to a contractor that is a small business concern. Reimbursable costs shall not include any costs arising from the letting, administration or supervision of performance of the subcontract, if the costs are included in the hourly rates payable under (a)(1) of this section.
- (3) To the extent able, the contractor shall -
 - (i) Obtain materials at the most advantageous prices available with due regard to securing prompt delivery of satisfactory materials; and
 - (ii) Take all cash and trade discounts, rebates, allowances, credits, salvage, commissions, and other benefits. When unable to take advantage of the benefits, the contractor shall promptly notify the Contracting Officer and give the reasons. Credit shall be given to the Government for cash and trade discounts, rebates, allowances, credits, salvage, the value of any appreciable scrap, commissions, and other amounts that have accrued to the benefit of the contractor, or would have accrued except for the fault or neglect of the contractor. The benefits lost without fault or neglect on the part of the contractor, or lost through fault of the Government, shall not be deducted from gross costs.

(c) Audit.

At any time before final payment under this contract the Contracting Officer may request audit of the invoices or vouchers and substantiating material. Each payment previously made shall be subject to reduction to the extent of amounts, on preceding invoices or vouchers, that are found by the Contracting Officer not to have been properly payable and shall also be subject to reduction for overpayments or to increase for underpayments. Upon receipt and approval of the voucher or invoice designated by the contractor as the "completion voucher" or "completion invoice" and substantiating material, and upon compliance by the contractor with all terms of this contract (including, without limitation, terms relating to patents and the terms of (d) and (e) of this section), the Government shall promptly pay any balance due the contractor. The completion invoice or voucher, and substantiating material, shall be submitted by the contractor as promptly as practicable following completion of the work under this contract, but in no event later than 1 year (or such longer period as the Contracting Officer may approve in writing) from the date of completion.

(d) Assignment.

The contractor, and each assignee under an assignment entered into under this contract and in effect at the time of final payment under this contract, shall execute and deliver, at the time of and as a condition precedent to final payment under this contract, a release discharging the Government, its officers, agents, and employees of and from all liabilities, obligations, and claims arising out of or under this contract, subject only to the following exceptions:

- (1) Specified claims in stated amounts, or in estimated amounts if the amounts are not susceptible of exact statement by the contractor.
 - (2) Claims, together with reasonable incidental expenses, based upon the liabilities of the contractor to third parties arising out of performing this contract, that are not known to the contractor on the date of the execution of the release, and of which the contractor gives notice in writing to the Contracting Officer not more than 6 years after the date of the release or the date of any notice to the contractor that the Government is prepared to make final payment, whichever is earlier.
 - (3) Claims for reimbursement of costs (other than expenses of the contractor by reason of its indemnification of the Government against patent liability), including reasonable incidental expenses, incurred by the contractor under the terms of this contract relating to patents.
- (e) Refunds.

The contractor agrees that any refunds, rebates, or credits (including any related interest) accruing to or received by the contractor or any assignee, that arise under the materials portion of this contract and for which the contractor has received reimbursement, shall be paid by the contractor to the Government. The contractor and each assignee, under an assignment entered into under this contract and in effect at the time of final payment under this contract, shall execute and deliver, at the time of and as a condition precedent to final payment under this contract, an assignment to the Government of such refunds, rebates, or credits (including any interest) in form and substance satisfactory to the Contracting Officer.

H.17 PAYMENTS UNDER FIRM FIXED PRICE TASK ORDERS

The Government shall pay the contractor upon the submission of proper invoices or vouchers, the prices stipulated in the firm fixed price task order for supplies delivered and accepted or services rendered and accepted, less any deduction provided in this contract. Unless otherwise specified in this contract, payment shall be made on partial deliveries accepted by the Government if:

- (a) The amount due on the deliveries warrants it; or
- (b) The contractor requests it and the amount due on the deliveries is at least \$1,000 or 50 percent of the total task order price.

H.18 DAVIS-BACON AND OTHER LABOR PROVISIONS FOR CONSTRUCTION SUBCONTRACTS

When it is determined by the Contracting Officer that the work to be performed under this contract is subject to the Davis-Bacon Act, the contractor and its subcontractors shall abide by the provisions of the Davis-Bacon Act.

H.19 CONTRACTOR INTERFACE WITH OTHER CONTRACTORS AND/OR GOVERNMENT EMPLOYEES

The contractor shall cooperate fully with all other on-site DOE contractors (including, but not limited to, support service, architect and engineering, janitorial, computer operation contractors, or consultants) and Government employees, and carefully fit its own work to such other work as may be directed by the Contracting Officer or the Principal Contracting Officer's Representative. The contractor shall not commit, or permit, any act which will interfere with the performance of work by any other contractor or by Government employees.

H.20 ENVIRONMENT, SAFETY, AND HEALTH – ON-SITE SERVICE CONTRACTS

- (a) The contractor shall take all reasonable precautions in the performance of the work under this contract to protect the safety and health of his/her employees, DOE/FETC employees, and the public, and to prevent damage to the environment and DOE/FETC-owned materials, supplies, equipment, facilities and any other DOE/FETC-owned property.

The contractor shall comply, as a minimum, with the requirements of DOE/FETC's environment, safety, and health programs as implemented through DOE and its support contractor staff. These programs are based on implementation of DOE/FETC's Worksmart standard set, which is compendium of applicable Federal, state, and local regulations, consensus standards, and DOE directives (Section J, Attachment J, Computing Environment). In particular, the contractor shall, as a minimum, comply with the procedural, record-keeping, and reporting requirements of these DOE/FETC's environmental, safety, and health programs and their supporting DOE/FETC's directives. The major reporting requirements are outlined in DOE Order 231.1, Environment, Safety, and Health Reporting. Where conflict exists among the standards' requirements, the most protective shall be adopted, unless relief is provided by the Contracting Officer. In order to provide consistent application of environment, safety, and health requirements across the DOE/FETC sites, the contractor shall, to the maximum extent possible, utilize existing DOE/FETC directives.

The Contracting Officer shall notify the contractor, in writing, of any non-compliance with the provisions of this clause. After receipt of such notice, the contractor shall immediately begin to take corrective action. In the event that the contractor fails to comply with DOE/FETC's environment, safety, and health requirements, the Contracting Officer may, without prejudice to any other legal or contractual rights of DOE, issue an order stopping all or any part of the work; thereafter, a start order for work resumption may be issued by the Contracting Officer. The contractor shall make no claim for an extension of time, or for compensation or damages by reason of, or in conjunction with, such work stoppage.

- (b) Specifically, the contractor shall plan, manage, and execute its work according to the principles of Integrated Safety Management, as outlined in DOE P 450.4, Safety Management Policy, October 15, 1996, and Integrated Safety Management System Guide, DOE G 450.4-1, Volumes 1 and 2, November 26, 1997. The contractor shall submit an Integrated Safety Management Implementation Plan to the Contracting Officer for review and approval within 30 days after the date of contract award. The plan shall detail how the contractor shall meet DOE's integrated safety management policy and principles, the contractor's corporate and DOE/FETC's environment, safety, and health requirements, and shall address the contractor's interface with the sites' existing ES&H programs, DOE staff, and other site contractors.
- (c) The contractor shall include this environment, safety and health clause in all subcontracts requiring work at the DOE/FETC sites. However, such flow down of responsibility shall not relieve the contractor of its obligation to assure compliance with the provisions of this clause.
- (d) The DOE or its authorized representative shall have the right to inspect any areas or facilities occupied by the contractor.
- (e) The contractor shall provide record keeping services, such as raw data, interpreted results, reports, correspondence, and other materials proving regulatory and standard compliance, according to DOE records management schedules.
- (f) Accidents or incidents resulting in human injury and/or property damage are to be reported immediately to the Contracting Officer or his/her representative.

Notification, recording and reporting requirements for accidents and/or incidents shall be conducted in accordance with 29 CFR 1904 and 1910. The Contracting Officer or his/her representative shall be provided with copies of all OSHA-required documentation within ten days of the accident and/or incident.

- (g) The contractor shall maintain an accurate record of on-site hours worked and shall provide this information to the Contracting Officer or his/her representative upon request.
- (h) The contractor shall collect the following environment, safety, and health indicators, if applicable:

Recordable Injury/Illness Rate (total number of OSHA-defined recordable injuries and illnesses/total hours worked)

Lost Work Day Case Rate (total number of OSHA-defined lost work day cases/total hours worked)

Regulated Pollutant Effluent (total pounds of permitted, regulated pollutants in air and water releases)

Hazardous Waste Generated (total cubic feet of hazardous waste shipped)

Corrective Maintenance Backlog (total number of corrective maintenance items over 90 days old and total number of corrective maintenance items due)

Preventive Maintenance Backlog (total number of preventive maintenance items over 90 days old and total number of preventive maintenance items due).

- (i) The contractor shall abide by the requirements of 48 CFR 970.5204-39, Acquisition and Use of Environmentally Preferable Products and Services.
- (j) The contractor shall allow participation of employees in DOE/FETC's site-wide emergency response program.

H.21 INDEMNITY – ENVIRONMENTAL, HEALTH AND SAFETY VIOLATIONS

Should the contractor, in the performance of work under this contract, fail to comply with the requirements of environmental permits, local laws or regulations, state laws or regulations, Federal laws or regulations, the Statement of Work and its Attachments, or a Task Order and cause any environmental, health or safety liability to be assessed against the Government, the contractor agrees to indemnify the Government for this liability. This requirement shall be placed in all subcontracts awarded by the contractor under this contract. The provisions of this clause are limited to liabilities not otherwise addressed by other provisions of this contract.

H.22 52.216-18 ORDERING. (OCT 1995)

- (a) Any supplies and services to be furnished under this contract shall be ordered by issuance of delivery orders or task orders by the individuals or activities designated in the Schedule. Such orders may be issued during the performance period specified in Clause F.1.
- (b) All delivery orders or task orders are subject to the terms and conditions of this contract. In the event of conflict between a delivery order or task order and this contract, the contract shall control.
- (c) If mailed, a delivery order or task order is considered "issued" when the Government deposits the order in the mail. Orders may be issued orally, by facsimile, or by electronic commerce methods only if authorized in the Schedule.

H.23 YEAR 2000 COMPLIANCE

Year 2000 compliant means, with respect to information technology, the information technology accurately processes date/time data (including, but not limited to, calculating, comparing, and sequencing) from, into, and between the twentieth and twenty-first centuries, and the years 1999 and 2000 and leap year calculations, to the extent that other information technology, used in combination with the information technology being acquired, properly exchanges date/time data with it.

The contractor assures that items delivered under this contract are year 2000 compliant.

H.24 LOBBYING RESTRICTION (DEPT. OF INTERIOR AND RELATED AGENCIES, 1998)

The contractor agrees that none of the funds obligated on this award shall be made available for any activity or the publication or distribution of literature that in any way tends to promote public support or opposition to any legislative proposal on which Congressional action is not complete. This restriction is in addition to those prescribed elsewhere in statute and regulation.

H.25 LOBBYING RESTRICTION (ENERGY AND WATER DEVELOPMENT APPROPRIATIONS ACT, 1998)

The contractor or awardee agrees that none of the funds obligated on this award shall be expended directly or indirectly to influence congressional action on any legislation or appropriation matters pending before

Congress, other than to communicate to Members of Congress as described in 18 U.S.C. 1913. This restriction is in addition to those prescribed elsewhere in statute and regulation.

H.26 INSURANCE REQUIREMENTS

In accordance with FAR 52.228-5 and FAR 52.237-7 (Section I), the Contractor shall provide insurance in the minimum amounts as set forth below.

A. Workers' Compensation.

The contractor shall maintain workers' compensation in accordance with applicable law.

B. Comprehensive General Liability Other Than Automobile.

Bodily Injury per person	\$ 500,000
per occurrence	\$1,000,000
Property Damage per accident	\$ 500,000
aggregate	\$1,000,000

C. Comprehensive Automobile.

Bodily Injury per person	\$ 500,000
Per occurrence	\$1,000,000
Property Damage per accident	\$ 50,000

D. Medical Professional Liability.

Per Occurrence	\$ 750,000
Aggregate	\$2,000,000

H.27 COMMUNITY COMMITMENT

It is the policy of the Federal Energy Technology Center (FETC) to be a constructive partner in the geographic region in which FETC conducts its business. The basic elements of this policy include: (1) recognizing the diverse interests of the region and its stakeholders; (2) engaging regional stakeholders in issues and concerns of mutual interest; and (3) recognizing that giving back to the community is a worthwhile business practice. Accordingly, the contractor agrees that its business operations and performance under the contract will be consistent with the intent of the policy and elements set forth above.

H.28 ORDER LIMITATIONS

- (a) *Minimum Order.* When the Government requires supplies or services covered by this contract in an amount of less than \$1,000, the contractor is not obligated to furnish those supplies or services under the contract.
- (b) *Maximum Order.* When the contractor is not obligated to honor--
- (1) Any order for a single item in excess of \$2,000,000.
 - (2) Any order for a combination of items in excess of \$2,000,000.
 - (3) A series of orders from the same ordering office within 60 days that together call for quantities exceeding the limitation in subparagraph (b)(2) or (2) of this section.
- (c) If this is a requirements contract (i.e., includes the Requirements clause at subsection 52.216-21 of the Federal Acquisition Regulation (FAR), the Government is not required to order a part of any one requirement from the contractor if that requirement exceeds the maximum-order limitations in paragraph (b) of this section.

- (d) Notwithstanding paragraphs (b) and (c) of this section, the contractor shall honor any order exceeding the maximum order limitations in paragraph (b), unless that order (or orders) is returned to the ordering office within 10 calendar days after issue, with written notice stating the contractor's intent not to ship the item (or items) called for and the reasons. Upon receiving this notice, the Government may acquire the supplies or services from another source.
- (e) If this is a requirements contract (i.e., includes the Requirements clause at subsection 52.216-21 of the Federal Acquisition Regulation (FAR), the Government is not required to order a part of any one requirement from the contractor if that requirement exceeds the maximum-order limitations in paragraph (b) of this section.
- (f) Notwithstanding paragraphs (b) and (c) of this section, the contractor shall honor any order exceeding the maximum order limitations in paragraph (b), unless that order (or orders) is returned to the ordering office within 10 calendar days after issue, with written notice stating the contractor's intent not to ship the item (or items) called for and the reasons. Upon receiving this notice, the Government may acquire the supplies or services from another source.

H.29 INSPECTION OF SERVICES—FIXED PRICE

- (a) *Definition.* "Services," as used in this clause, includes services performed, workmanship, and material furnished or utilized in the performance of services.
- (b) The contractor shall provide and maintain an inspection system acceptable to the Government covering the services under this contract. Complete records of all inspection work performed by the Contractor shall be maintained and made available to the Government during contract performance and for as long as the contract requires.
- (c) The Government has the right to inspect and test all services called for by the contract, to the extent practicable at all times and places during the term of the contract. The Government shall perform inspections and tests in a manner that will not unduly the work.
- (d) If the Government performs inspections or tests on the premises of the contractor or a subcontractor, the contractor shall furnish, and shall require subcontractors to furnish, at no increase in contract price, all reasonable performance of these duties.
- (e) If any of the services do not conform with contract requirements, the Government may require the contractor to perform the services again in conformity with contract requirements, at no increase in contract amount. When the defects in services cannot be corrected by reperformance, the Government may—
 - (1) Require the contractor to take necessary action to ensure that future performance conforms to contract requirements; and
 - (2) Reduce the contract price to reflect the reduced value of the services performed.
- (f) If the contractor fails to promptly perform the services again or to take the necessary action to ensure future performance in conformity with contract requirements, the Government may—
 - (1) By contract or otherwise, perform the services and charge to the contractor any cost incurred by the Government that is directly related to the performance of such service; or
 - (2) Terminate the contract for default.

H.30 TERMINATION (FIXED-PRICE SUPPLY AND SERVICE)

- (a)(1) The Government may, subject to paragraphs (c) and (d) of this clause, by written notice of default to the contractor, terminate this contract in whole or in part if the contractor fails to—
 - (i) Deliver the supplies or to perform the services within the time specified in this contract or any extension;

- (ii) Make progress, so as to endanger performance of this contract (but see subparagraph (a)(2) of this clause); or
 - (iii) Perform any of the other provisions of this contract (but see subparagraph (a)(2) of this clause).
- (2) The Government's right to terminate this contract under subdivisions (a)(1)(ii) and (1)(iii) of this clause, may be exercised if the Contractor does not cure such failure within 10 days (or more if authorized in writing by the Contracting Officer) after receipt of the notice from the Contracting Officer specifying the failure.
- (b) If the Government terminate this contract in whole or in part, it may acquire, under the terms and in the manner the Contracting Officer considers appropriate, supplies or services similar to those terminated, and the contractor will be liable to the Government for any excess costs for those supplies or services. However, the contractor shall continue the work not terminated.
- (c) Except for defaults of subcontractors at any tier, the contractor shall not be liable for any excess costs if the failure to perform the contract arises from causes beyond the control and without the fault or negligence of the contractor. Examples of such causes include (1) acts of God or of the public enemy, (2) acts of the Government in either its sovereign or contractual capacity, (3) fires, (4) floods, (5) epidemics, (6) quarantine restrictions, (7) strikes, (8) freight embargoes, and (9) unusually severe weather. In each instance the failure to perform must be beyond the control and without the fault or negligence of the contractor.
- (d) If the failure to perform is caused by the default of a subcontractor at any tier, and if the cause of the default is beyond the control of both the contractor and subcontractor, and without the fault or negligence of either, the contractor shall not be liable for any excess costs for failure to perform, unless the subcontracted supplies or services were obtainable from other sources in sufficient time for the contractor to meet the required delivery schedule.
- (e) If this contract is terminated for default, the Government may require the contractor to transfer title and deliver to the Government, as directed by the Contracting Officer, any (1) completed supplies, and (2) partially completed supplies and materials, parts, tools, dies, jigs, fixtures, plans, drawings, information, and contract rights (collectively referred to as "manufacturing materials" in this clause) that the contractor has specifically produced or acquired for the terminated portion of this contract. Upon direction of the Contracting Officer, the contractor shall also protect and preserve property in its possession in which the Government has an interest.
- (f) The Government shall pay contract price for completed supplies delivered and accepted. The contractor and Contracting Officer shall agree on the amount of payment for manufacturing materials delivered and accepted and for the protection and preservation of the property. Failure to agree will be a dispute under the Disputes clause. The Government may withhold from these amounts any sum the Contracting Officer determines to be necessary to protect the Government against loss because of outstanding liens or claims of former lien holders.
- (g) If, after termination, it is determined that the contractor was not in default, or that the default was excusable, the rights and obligations of the parties shall be the same as if the termination had been issued for the convenience of the Government.
- (h) The rights and remedies of the Government in this clause are in addition to any other rights and remedies provided by law or under this contract.

H.31 PAYMENT OF PERFORMANCE INCENTIVE

The Government will promptly make payment of any incentive award upon submission by the contractor to the Contracting Officer, of a public voucher or invoice in the amount of the total incentive earned for the period evaluated. Payment shall be made based upon an authorization letter from the Incentive Administration Official (IAO) and without the need for a contract modification.

H.32 ADVANCED COST UNDERSTANDINGS

(a) Relocation and Living Expense Policy - Relocation costs are allowable to FETC sites and project areas when they are (1) permitted under FAR 31.205-35 and (2) consistent with the Contractor's relocation policy and the policy has been approved by the Contracting Officer prior to incurrence of cost. Relocation costs for employees returning to the point of origin or another site are not allowable.

(b) Severance Pay - Per FAR 31.205-6(g)(2)(ii), only the portion of severance pay attributed to the time the employee was engaged in work under this contract will be allowed.

(c) Administrative Leave - When a FETC facility is shut down, most typically for inclement weather, administrative leave for employees supporting FETC task orders is in order and shall be an allowable cost.

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SECTION I - CONTRACT CLAUSES

I.1 52.202-1 DEFINITIONS. (OCT 1995)

- (a) "Head of the agency" (also called "agency head") or "Secretary" means the Secretary (or Attorney General, Administrator, Governor, Chairperson, or other chief official, as appropriate) of the agency, including any deputy or assistant chief official of the agency; and the term "authorized representative" means any person, persons, or board (other than the Contracting Officer) authorized to act for the head of the agency or Secretary.
- (b) "Commercial component" means any component that is a commercial item.
- (c) "Commercial item" means -
 - (1) Any item, other than real property, that is of a type customarily used for nongovernmental purposes and that -
 - (i) Has been sold, leased, or licensed to the general public; or
 - (ii) Has been offered for sale, lease, or license to the general public;
 - (2) Any item that evolved from an item described in paragraph (c)(1) of this clause through advances in technology or performance and that is not yet available in the commercial marketplace, but will be available in the commercial marketplace in time to satisfy the delivery requirements under a Government solicitation;
 - (3) Any item that would satisfy a criterion expressed in paragraphs (c)(1) or (c)(2) of this clause, but for -
 - (i) Modifications of a type customarily available in the commercial marketplace; or
 - (ii) - Minor modifications of a type not customarily available in the commercial marketplace made to meet Federal Government requirements. "Minor" modifications means modifications that do not significantly alter the nongovernmental function or essential physical characteristics of an item or component, or change the purpose of a process. Factors to be considered in determining whether a modification is minor include the value and size of the modification and the comparative value and size of the final product. Dollar values and percentages may be used as guideposts, but are not conclusive evidence that a modification is minor;
 - (4) Any combination of items meeting the requirements of paragraphs (c)(1), (2), (3), or (5) of this clause that are of a type customarily combined and sold in combination to the general public;
 - (5) Installation services, maintenance services, repair services, training services, and other services if such services are procured for support of an item referred to in paragraphs (c)(1), (2), (3), or (4) of this clause, and if the source of such services -
 - (i) Offers such services to the general public and the Federal Government contemporaneously and under similar terms and conditions; and
 - (ii) Offers to use the same work force for providing the Federal Government with such services as the source uses for providing such services to the general public;
 - (6) Services of a type offered and sold competitively in substantial quantities in the commercial marketplace based on established catalog or market prices for specific tasks performed under standard commercial terms and conditions. This does not include services that are sold based on hourly rates without an established catalog or market price for a specific service performed;

- (7) Any item, combination of items, or service referred to in subparagraphs (c)(1) through (c)(6), notwithstanding the fact that the item, combination of items, or service is transferred between or among separate divisions, subsidiaries, or affiliates of a Contractor; or
- (8) A nondevelopmental item, if the procuring agency determines the item was developed exclusively at private expense and sold in substantial quantities, on a competitive basis, to multiple State and local Governments.
- (d) "Component" means any item supplied to the Federal Government as part of an end item or of another component.
- (e) "Nondevelopmental item" means -
 - (1) Any previously developed item of supply used exclusively for governmental purposes by a Federal agency, a State or local government, or a foreign government with which the United States has a mutual defense cooperation agreement;
 - (2) Any item described in paragraph (e)(1) of this definition that requires only minor modification or modifications of a type customarily available in the commercial marketplace in order to meet the requirements of the procuring department or agency; or
 - (3) Any item of supply being produced that does not meet the requirements of paragraph (e)(1) or (e)(2) solely because the item is not yet in use.
- (f) "Contracting Officer" means a person with the authority to enter into, administer, and/or terminate contracts and make related determinations and findings. The term includes certain authorized representatives of the Contracting Officer acting within the limits of their authority as delegated by the Contracting Officer.
- (g) Except as otherwise provided in this contract, the term "subcontracts" includes, but is not limited to, purchase orders and changes and modifications to purchase orders under this contract.

I.2 52.203-3 GRATUITIES. (APR 1984)

- (a) The right of the Contractor to proceed may be terminated by written notice if, after notice and hearing, the agency head or a designee determines that the Contractor, its agent, or another representative -
 - (1) Offered or gave a gratuity (e.g., an entertainment or gift) to an officer, official, or employee of the Government; and
 - (2) Intended, by the gratuity, to obtain a contract or favorable treatment under a contract.
- (b) The facts supporting this determination may be reviewed by any court having lawful jurisdiction.
- (c) If this contract is terminated under paragraph (a) of this clause, the Government is entitled -
 - (1) To pursue the same remedies as in a breach of the contract; and
 - (2) In addition to any other damages provided by law, to exemplary damages of not less than 3 nor more than 10 times the cost incurred by the Contractor in giving gratuities to the person concerned, as determined by the agency head or a designee. (This subparagraph (c)(2) is applicable only if this contract uses money appropriated to the Department of Defense.)
- (d) The rights and remedies of the Government provided in this clause shall not be exclusive and are in addition to any other rights and remedies provided by law or under this contract.

I.3 52.203-5 COVENANT AGAINST CONTINGENT FEES. (APR 1984)

- (a) The Contractor warrants that no person or agency has been employed or retained to solicit or obtain this contract upon an agreement or understanding for a contingent fee, except a bona fide employee or agency. For breach or violation of this warranty, the Government shall have the right to annul this contract without liability or, in its discretion, to deduct from the contract price or consideration, or otherwise recover, the full amount of the contingent fee.

- (b) "Bona fide agency," as used in this clause, means an established commercial or selling agency, maintained by a contractor for the purpose of securing business, that neither exerts nor proposes to exert improper influence to solicit or obtain Government contracts nor holds itself out as being able to obtain any Government contract or contracts through improper influence.

"Bona fide employee," as used in this clause, means a person, employed by a contractor and subject to the contractor's supervision and control as to time, place, and manner of performance, who neither exerts nor proposes to exert improper influence to solicit or obtain Government contracts nor holds out as being able to obtain any Government contract or contracts through improper influence.

"Contingent fee," as used in this clause, means any commission, percentage, brokerage, or other fee that is contingent upon the success that a person or concern has in securing a Government contract.

"Improper influence," as used in this clause, means any influence that induces or tends to induce a Government employee or officer to give consideration or to act regarding a Government contract on any basis other than the merits of the matter.

I.4 52.203-6 RESTRICTIONS ON SUBCONTRACTOR SALES TO THE GOVERNMENT. (JUL 1995)

- (a) Except as provided in (b) of this clause, the Contractor shall not enter into any agreement with an actual or prospective subcontractor, nor otherwise act in any manner, which has or may have the effect of restricting sales by such subcontractors directly to the Government of any item or process (including computer software) made or furnished by the subcontractor under this contract or under any follow-on production contract.

- (b) The prohibition in (a) of this clause does not preclude the Contractor from asserting rights that are otherwise authorized by law or regulation.

- (c) The Contractor agrees to incorporate the substance of this clause, including this paragraph (c), in all subcontracts under this contract which exceed \$100,000.

I.5 52.203-7 ANTI-KICKBACK PROCEDURES. (JUL 1995)

- (a) Definitions.

"Kickback," as used in this clause, means any money, fee, commission, credit, gift, gratuity, thing of value, or compensation of any kind which is provided, directly or indirectly, to any prime Contractor, prime Contractor employee, subcontractor, or subcontractor employee for the purpose of improperly obtaining or rewarding favorable treatment in connection with a prime contract or in connection with a subcontract relating to a prime contract..

"Person," as used in this clause, means a corporation, partnership, business association of any kind, trust, joint-stock company, or individual.

"Prime contract," as used in this clause, means a contract or contractual action entered into by the United States for the purpose of obtaining supplies, materials, equipment, or services of any kind.

"Prime Contractor" as used in this clause, means a person who has entered into a prime contract with the United States.

"Prime Contractor employee," as used in this clause, means any officer, partner, employee, or agent of a prime Contractor.

"Subcontract," as used in this clause, means a contract or contractual action entered into by a prime Contractor or subcontractor for the purpose of obtaining supplies, materials, equipment, or services of any kind under a prime contract.

"Subcontractor," as used in this clause, (1) means any person, other than the prime Contractor, who offers to furnish or furnishes any supplies, materials, equipment, or services of any kind under a prime contract or a subcontract entered into in connection with such prime contract, and (2) includes any person who offers to furnish or furnishes general supplies to the prime Contractor or a higher tier subcontractor.

"Subcontractor employee," as used in this clause, means any officer, partner, employee, or agent of a subcontractor.

(b) The Anti-Kickback Act of 1986 (41 U.S.C. 51-58) (the Act), prohibits any person from -

- (1) Providing or attempting to provide or offering to provide any kickback;
 - (2) Soliciting, accepting, or attempting to accept any kickback; or
 - (3) Including, directly or indirectly, the amount of any kickback in the contract price charged by a prime Contractor to the United States or in the contract price charged by a subcontractor to a prime Contractor or higher tier subcontractor.
- (c)(1) The Contractor shall have in place and follow reasonable procedures designed to prevent and detect possible violations described in paragraph (b) of this clause in its own operations and direct business relationships.
- (2) When the Contractor has reasonable grounds to believe that a violation described in paragraph (b) of this clause may have occurred, the Contractor shall promptly report in writing the possible violation. Such reports shall be made to the inspector general of the contracting agency, the head of the contracting agency if the agency does not have an inspector general, or the Department of Justice.
 - (3) The Contractor shall cooperate fully with any Federal agency investigating a possible violation described in paragraph (b) of this clause.
 - (4) The Contracting Officer may (i) offset the amount of the kickback against any monies owed by the United States under the prime contract and/or (ii) direct that the Prime Contractor withhold from sums owed a subcontractor under the prime contract the amount of the kickback. The Contracting Officer may order that monies withheld under subdivision (c)(4)(ii) of this clause be paid over to the Government unless the Government has already offset those monies under subdivision (c)(4)(i) of this clause. In either case, the Prime Contractor shall notify the Contracting Officer when the monies are withheld.
 - (5) The Contractor agrees to incorporate the substance of this clause, including subparagraph (c)(5) but excepting subparagraph (c)(1), in all subcontracts under this contract which exceed \$100,000.

I.6 52.203-8 CANCELLATION, RESCISSION, AND RECOVERY OF FUNDS FOR ILLEGAL OR IMPROPER ACTIVITY. (JAN 1997)

(a) If the Government receives information that a contractor or a person has engaged in conduct constituting a violation of subsection (a), (b), (c), or (d) of section 27 of the Office of Federal Procurement Policy Act (41 U.S.C. 423) (the Act), as amended by section 4304 of the National Defense Authorization Act for Fiscal Year 1996 (Pub. L. 104-106), the Government may -

- (1) Cancel the solicitation, if the contract has not yet been awarded or issued; or

- (2) Rescind the contract with respect to which -
 - (i) The Contractor or someone acting for the Contractor has been convicted for an offense where the conduct constitutes a violation of subsection 27(a) or (b) of the Act for the purpose of either -
 - (A) Exchanging the information covered by such subsections for anything of value; or
 - (B) Obtaining or giving anyone a competitive advantage in the award of a Federal agency procurement contract; or
 - (ii) The head of the contracting activity has determined, based upon a preponderance of the evidence, that the Contractor or someone acting for the Contractor has engaged in conduct constituting an offense punishable under subsection 27(e)(1) of the Act.
 - (b) If the Government rescinds the contract under paragraph (a) of this clause, the Government is entitled to recover, in addition to any penalty prescribed by law, the amount expended under the contract.
 - (c) The rights and remedies of the Government specified herein are not exclusive, and are in addition to any other rights and remedies provided by law, regulation, or under this contract.
- 1.7 52.203-10 PRICE OR FEE ADJUSTMENT FOR ILLEGAL OR IMPROPER ACTIVITY. (JAN 1997)**
- (a) The Government, at its election, may reduce the price of a fixed-price type contract and the total cost and fee under a cost-type contract by the amount of profit or fee determined as set forth in paragraph (b) of this clause if the head of the contracting activity or designee determines that there was a violation of subsection 27(a), (b), or (c) of the Office of Federal Procurement Policy Act, as amended (41 U.S.C. 423), as implemented in section 3.104 of the Federal Acquisition Regulation.
 - (b) The price or fee reduction referred to in paragraph (a) of this clause shall be -
 - (1) For cost-plus-fixed-fee contracts, the amount of the fee specified in the contract at the time of award;
 - (2) For cost-plus-incentive-fee contracts, the target fee specified in the contract at the time of award, notwithstanding any minimum fee or "fee floor" specified in the contract;
 - (3) For cost-plus-award-fee contracts -
 - (i) The base fee established in the contract at the time of contract award;
 - (ii) If no base fee is specified in the contract, 30 percent of the amount of each award fee otherwise payable to the Contractor for each award fee evaluation period or at each award fee determination point.
 - (4) For fixed-price-incentive contracts, the Government may -
 - (i) Reduce the contract target price and contract target profit both by an amount equal to the initial target profit specified in the contract at the time of contract award; or
 - (ii) If an immediate adjustment to the contract target price and contract target profit would have a significant adverse impact on the incentive price revision relationship under the contract, or adversely affect the contract financing provisions, the Contracting Officer may defer such adjustment until establishment of the total final price of the contract. The total final price established in accordance with the incentive price revision provisions of the contract shall be reduced by an amount equal to the initial target profit specified in the contract at the time of contract award and such reduced price shall be the total final contract price.

- (5) For firm-fixed-price contracts, by 10 percent of the initial contract price or a profit amount determined by the Contracting Officer from records or documents in existence prior to the date of the contract award.
- (c) The Government may, at its election, reduce a prime contractor's price or fee in accordance with the procedures of paragraph (b) of this clause for violations of the Act by its subcontractors by an amount not to exceed the amount of profit or fee reflected in the subcontract at the time the subcontract was first definitively priced.
- (d) In addition to the remedies in paragraphs (a) and (c) of this clause, the Government may terminate this contract for default. The rights and remedies of the Government specified herein are not exclusive, and are in addition to any other rights and remedies provided by law or under this contract.

I.8 52.203-12 LIMITATION ON PAYMENTS TO INFLUENCE CERTAIN FEDERAL TRANSACTIONS. (JUN 1997)

(a) Definitions.

"Agency," as used in this clause, means executive agency as defined in 2.101.

"Covered Federal action," as used in this clause, means any of the following Federal actions:

- (1) The awarding of any Federal contract.
- (2) The making of any Federal grant.
- (3) The making of any Federal loan.
- (4) The entering into of any cooperative agreement.
- (5) The extension, continuation, renewal, amendment, or modification of any Federal contract, grant, loan, or cooperative agreement.

"Indian tribe" and "tribal organization," as used in this clause, have the meaning provided in section 4 of the Indian Self-Determination and Education Assistance Act (25 U.S.C. 450B) and include Alaskan Natives.

"Influencing or attempting to influence," as used in this clause, means making, with the intent to influence, any communication to or appearance before an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with any covered Federal action.

"Local government," as used in this clause, means a unit of government in a State and, if chartered, established, or otherwise recognized by a State for the performance of a governmental duty, including a local public authority, a special district, an intrastate district, a council of governments, a sponsor group representative organization, and any other instrumentality of a local government.

"Officer or employee of an agency," as used in this clause, includes the following individuals who are employed by an agency:

- (1) An individual who is appointed to a position in the Government under Title 5, United States Code, including a position under a temporary appointment.
- (2) A member of the uniformed services, as defined in subsection 101(3), Title 37, United States Code.
- (3) A special Government employee, as defined in section 202, Title 18, United States Code.
- (4) An individual who is a member of a Federal advisory committee, as defined by the Federal Advisory Committee Act, Title 5, United States Code, appendix 2.

"Person," as used in this clause, means an individual, corporation, company, association, authority, firm, partnership, society, State, and local government, regardless of whether such entity is operated for profit, or not for profit. This term excludes an Indian tribe, tribal organization, or any other Indian organization with respect to expenditures specifically permitted by other Federal law.

"Reasonable compensation," as used in this clause, means, with respect to a regularly employed officer or employee of any person, compensation that is consistent with the normal compensation for such officer or employee for work that is not furnished to, not funded by, or not furnished in cooperation with the Federal Government.

"Reasonable payment," as used in this clause, means, with respect to professional and other technical services, a payment in an amount that is consistent with the amount normally paid for such services in the private sector.

"Recipient," as used in this clause, includes the Contractor and all subcontractors. This term excludes an Indian tribe, tribal organization, or any other Indian organization with respect to expenditures specifically permitted by other Federal law.

"Regularly employed," as used in this clause, means, with respect to an officer or employee of a person requesting or receiving a Federal contract, an officer or employee who is employed by such person for at least 130 working days within 1 year immediately preceding the date of the submission that initiates agency consideration of such person for receipt of such contract. An officer or employee who is employed by such person for less than 130 working days within 1 year immediately preceding the date of the submission that initiates agency consideration of such person shall be considered to be regularly employed as soon as he or she is employed by such person for 130 working days.

"State," as used in this clause, means a State of the United States, the District of Columbia, the Commonwealth of Puerto Rico, a territory or possession of the United States, an agency or instrumentality of a State, and multi-State, regional, or interstate entity having governmental duties and powers.

(b) Prohibitions.

- (1) Section 1352 of Title 31, United States Code, among other things, prohibits a recipient of a Federal contract, grant, loan, or cooperative agreement from using appropriated funds to pay any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with any of the following covered Federal actions: the awarding of any Federal contract; the making of any Federal grant; the making of any Federal loan; the entering into of any cooperative agreement; or the modification of any Federal contract, grant, loan, or cooperative agreement.
- (2) The Act also requires Contractors to furnish a disclosure if any funds other than Federal appropriated funds (including profit or fee received under a covered Federal transaction) have been paid, or will be paid, to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with a Federal contract, grant, loan, or cooperative agreement.
- (3) The prohibitions of the Act do not apply under the following conditions:
 - (i) Agency and legislative liaison by own employees.
 - (A) The prohibition on the use of appropriated funds, in subparagraph (b)(1) of this clause, does not apply in the case of a payment of reasonable compensation made to an officer or employee of a person requesting or receiving a covered Federal action if the payment is for agency and legislative liaison activities not directly related to a covered Federal action.

- (B) For purposes of subdivision (b)(3)(i)(A) of this clause, providing any information specifically requested by an agency or Congress is permitted at any time.
 - (C) The following agency and legislative liaison activities are permitted at any time where they are not related to a specific solicitation for any covered Federal action:
 - (1) Discussing with an agency the qualities and characteristics (including individual demonstrations) of the person's products or services, conditions or terms of sale, and service capabilities.
 - (2) Technical discussions and other activities regarding the application or adaptation of the person's products or services for an agency's use.
 - (D) The following agency and legislative liaison activities are permitted where they are prior to formal solicitation of any covered Federal action -
 - (1) Providing any information not specifically requested but necessary for an agency to make an informed decision about initiation of a covered Federal action;
 - (2) Technical discussions regarding the preparation of an unsolicited proposal prior to its official submission; and
 - (3) Capability presentations by persons seeking awards from an agency pursuant to the provisions of the Small Business Act, as amended by Pub. L. 95-507, and subsequent amendments.
 - (E) Only those services expressly authorized by subdivision (b)(3)(i)(A) of this clause are permitted under this clause.
- (ii) Professional and technical services.
- (A) The prohibition on the use of appropriated funds, in subparagraph (b)(1) of this clause, does not apply in the case of -
 - (1) A payment of reasonable compensation made to an officer or employee of a person requesting or receiving a covered Federal action or an extension, continuation, renewal, amendment, or modification of a covered Federal action, if payment is for professional or technical services rendered directly in the preparation, submission, or negotiation of any bid, proposal, or application for that Federal action or for meeting requirements imposed by or pursuant to law as a condition for receiving that Federal action.
 - (2) Any reasonable payment to a person, other than an officer or employee of a person requesting or receiving a covered Federal action or an extension, continuation, renewal, amendment, or modification of a covered Federal action if the payment is for professional or technical services rendered directly in the preparation, submission, or negotiation of any bid, proposal, or application for that Federal action or for meeting requirements imposed by or pursuant to law as a condition for receiving that Federal action. Persons other than officers or employees of a person requesting or receiving a covered Federal action include consultants and trade associations.

- (B) For purposes of subdivision (b)(3)(ii)(A) of this clause, "professional and technical services" shall be limited to advice and analysis directly applying any professional or technical discipline. For example, drafting of a legal document accompanying a bid or proposal by a lawyer is allowable. Similarly, technical advice provided by an engineer on the performance or operational capability of a piece of equipment rendered directly in the negotiation of a contract is allowable. However, communications with the intent to influence made by a professional (such as a licensed lawyer) or a technical person (such as a licensed accountant) are not allowable under this section unless they provide advice and analysis directly applying their professional or technical expertise and unless the advice or analysis is rendered directly and solely in the preparation, submission or negotiation of a covered Federal action. Thus, for example, communications with the intent to influence made by a lawyer that do not provide legal advice or analysis directly and solely related to the legal aspects of his or her client's proposal, but generally advocate one proposal over another are not allowable under this section because the lawyer is not providing professional legal services. Similarly, communications with the intent to influence made by an engineer providing an engineering analysis prior to the preparation or submission of a bid or proposal are not allowable under this section since the engineer is providing technical services but not directly in the preparation, submission or negotiation of a covered Federal action.
- (C) Requirements imposed by or pursuant to law as a condition for receiving a covered Federal award include those required by law or regulation and any other requirements in the actual award documents.
- (D) Only those services expressly authorized by subdivisions (b)(3)(ii)(A)(1) and (2) of this clause are permitted under this clause.
- (E) The reporting requirements of FAR 3.803(a) shall not apply with respect to payments of reasonable compensation made to regularly employed officers or employees of a person.

(c) Disclosure.

- (1) The Contractor who requests or receives from an agency a Federal contract shall file with that agency a disclosure form, OMB standard form, Disclosure of Lobbying Activities, if such person has made or has agreed to make any payment using nonappropriated funds (to include profits from any covered Federal action), which would be prohibited under subparagraph (b)(1) of this clause, if paid for with appropriated funds.
- (2) The Contractor shall file a disclosure form at the end of each calendar quarter in which there occurs any event that materially affects the accuracy of the information contained in any disclosure form previously filed by such person under subparagraph (c)(1) of this clause. An event that materially affects the accuracy of the information reported includes -
 - (i) A cumulative increase of \$25,000 or more in the amount paid or expected to be paid for influencing or attempting to influence a covered Federal action; or
 - (ii) A change in the person(s) or individual(s) influencing or attempting to influence a covered Federal action; or
 - (iii) A change in the officer(s), employee(s), or Member(s) contacted to influence or attempt to influence a covered Federal action.
- (3) The Contractor shall require the submittal of a certification, and if required, a disclosure form by any person who requests or receives any subcontract exceeding \$100,000 under the Federal contract.

- (4) All subcontractor disclosure forms (but not certifications) shall be forwarded from tier to tier until received by the prime Contractor. The prime Contractor shall submit all disclosures to the Contracting Officer at the end of the calendar quarter in which the disclosure form is submitted by the subcontractor. Each subcontractor certification shall be retained in the subcontract file of the awarding Contractor.
- (d) Agreement. The Contractor agrees not to make any payment prohibited by this clause.
- (e) Penalties.
 - (1) Any person who makes an expenditure prohibited under paragraph (a) of this clause or who fails to file or amend the disclosure form to be filed or amended by paragraph (b) of this clause shall be subject to civil penalties as provided for by 31 U.S.C. 1352. An imposition of a civil penalty does not prevent the Government from seeking any other remedy that may be applicable.
 - (2) Contractors may rely without liability on the representation made by their subcontractors in the certification and disclosure form.
- (f) Cost allowability. Nothing in this clause makes allowable or reasonable any costs which would otherwise be unallowable or unreasonable. Conversely, costs made specifically unallowable by the requirements in this clause will not be made allowable under any other provision.

I.9 52.204-4 PRINTING/COPYING DOUBLE-SIDED ON RECYCLED PAPER. (JUN 1996)

- (a) In accordance with Executive Order 12873, dated October 20, 1993, as amended by Executive Order 12995, dated March 25, 1996, the Offeror/Contractor is encouraged to submit paper documents, such as offers, letters, or reports, that are printed/copied double-sided on recycled paper that has at least 20 percent post-consumer material.
- (b) The 20 percent standard applies to high-speed copier paper, offset paper, forms bond, computer printout paper, carbonless paper, file folders, white woven envelopes, and other uncoated printed and writing paper, such as writing and office paper, book paper, cotton fiber paper, and cover stock. An alternative to meeting the 20 percent post-consumer material standard is 50 percent recovered material content of certain industrial by-products.

I.10 52.209-6 PROTECTING THE GOVERNMENT'S INTEREST WHEN SUBCONTRACTING WITH CONTRACTORS DEBARRED, SUSPENDED, OR PROPOSED FOR DEBARMENT. (JUL 1995)

- (a) The Government suspends or debar Contractors to protect the Government's interests. The Contractor shall not enter into any subcontract in excess of \$25,000 with a Contractor that is debarred, suspended, or proposed for debarment unless there is a compelling reason to do so.
- (b) The Contractor shall require each proposed first-tier subcontractor, whose subcontract will exceed \$25,000, to disclose to the Contractor, in writing, whether as of the time of award of the subcontract, the subcontractor, or its principals, is or is not debarred, suspended, or proposed for debarment by the Federal Government.
- (c) A corporate officer or a designee of the Contractor shall notify the Contracting Officer, in writing, before entering into a subcontract with a party that is debarred, suspended, or proposed for debarment (see FAR 9.404 for information on the List of Parties Excluded from Federal Procurement and Nonprocurement Programs). The notice must include the following:
 - (1) The name of the subcontractor.
 - (2) The Contractor's knowledge of the reasons for the subcontractor being on the List of Parties Excluded from Federal Procurement and Nonprocurement Programs.

- (3) The compelling reason(s) for doing business with the subcontractor notwithstanding its inclusion on the List of Parties Excluded From Federal Procurement and Nonprocurement Programs.
- (4) The systems and procedures the Contractor has established to ensure that it is fully protecting the Government's interests when dealing with such subcontractor in view of the specific basis for the party's debarment, suspension, or proposed debarment.

I.11 52.215-2 AUDIT AND RECORDS - NEGOTIATION. (AUG 1996)

- (a) As used in this clause, "records" includes books, documents, accounting procedures and practices, and other data, regardless of type and regardless of whether such items are in written form, in the form of computer data, or in any other form.
- (b) Examination of costs. If this is a cost-reimbursement, incentive, time-and-materials, labor-hour, or price redeterminable contract, or any combination of these, the Contractor shall maintain and the Contracting Officer, or an authorized representative of the Contracting Officer, shall have the right to examine and audit all records and other evidence sufficient to reflect properly all costs claimed to have been incurred or anticipated to be incurred directly or indirectly in performance of this contract. This right of examination shall include inspection at all reasonable times of the Contractor's plants, or parts of them, engaged in performing the contract.
- (c) Cost or pricing data. If the Contractor has been required to submit cost or pricing data in connection with any pricing action relating to this contract, the Contracting Officer, or an authorized representative of the Contracting Officer, in order to evaluate the accuracy, completeness, and currency of the cost or pricing data, shall have the right to examine and audit all of the Contractor's records, including computations and projections, related to -
 - (1) The proposal for the contract, subcontract, or modification;
 - (2) The discussions conducted on the proposal(s), including those related to negotiating;
 - (3) Pricing of the contract, subcontract, or modification; or
 - (4) Performance of the contract, subcontract or modification.
- (d) Comptroller General.
 - (1) The Comptroller General of the United States, or an authorized representative, shall have access to and the right to examine any of the Contractor's directly pertinent records involving transactions related to this contract or a subcontract hereunder.
 - (2) This paragraph may not be construed to require the Contractor or subcontractor to create or maintain any record that the Contractor or subcontractor does not maintain in the ordinary course of business or pursuant to a provision of law.
- (e) Reports. If the Contractor is required to furnish cost, funding, or performance reports, the Contracting Officer or an authorized representative of the Contracting Officer shall have the right to examine and audit the supporting records and materials, for the purpose of evaluating -
 - (1) The effectiveness of the Contractor's policies and procedures to produce data compatible with the objectives of these reports; and
 - (2) The data reported.

- (f) Availability. The Contractor shall make available at its office at all reasonable times the records, materials, and other evidence described in paragraphs (a), (b), (c), (d), and (e) of this clause, for examination, audit, or reproduction, until 3 years after final payment under this contract or for any shorter period specified in Subpart 4.7, Contractor Records Retention, of the Federal Acquisition Regulation (FAR), or for any longer period required by statute or by other clauses of this contract. In addition -
- (1) If this contract is completely or partially terminated, the records relating to the work terminated shall be made available for 3 years after any resulting final termination settlement; and
 - (2) Records relating to appeals under the Disputes clause or to litigation or the settlement of claims arising under or relating to this contract shall be made available until such appeals, litigation, or claims are finally resolved.
- (g) The Contractor shall insert a clause containing all the terms of this clause, including this paragraph (g), in all subcontracts under this contract that exceed the simplified acquisition threshold, and -
- (1) That are cost-reimbursement, incentive, time-and-materials, labor-hour, or price-redeterminable type or any combination of these;
 - (2) For which cost or pricing data are required; or
 - (3) That require the subcontractor to furnish reports as discussed in paragraph (e) of this clause.
- The clause may be altered only as necessary to identify properly the contracting parties and the Contracting Officer under the Government prime contract.

I.12 52.215-8 ORDER OF PRECEDENCE—UNIFORM CONTRACT FORMAT. (OCT 1997)

Any inconsistency in this solicitation or contract shall be resolved by giving precedence in the following order:

- (a) The Schedule (excluding the specifications).
- (b) Representations and other instructions.
- (c) Contract clauses.
- (d) Other documents, exhibits, and attachments.
- (e) The specifications.

I.13 52.215-10 PRICE REDUCTION FOR DEFECTIVE COST OR PRICING DATA. (OCT 1997)

- (a) If any price, including profit or fee, negotiated in connection with this contract, or any cost reimbursable under this contract, was increased by any significant amount because—
- (1) The Contractor or a subcontractor furnished cost or pricing data that were not complete, accurate, and current as certified in its Certificate of Current Cost or Pricing Data;
 - (2) A subcontractor or prospective subcontractor furnished the Contractor cost or pricing data that were not complete, accurate, and current as certified in the Contractor's Certificate of Current Cost or Pricing Data; or
 - (3) Any of these parties furnished data of any description that were not accurate, the price or cost shall be reduced accordingly and the contract shall be modified to reflect the reduction.
- (b) Any reduction in the contract price under paragraph (a) of this clause due to defective data from a prospective subcontractor that was not subsequently awarded the subcontract shall be limited to the amount, plus applicable overhead and profit markup, by which—

- (1) The actual subcontract; or
 - (2) The actual cost to the Contractor, if there was no subcontract, was less than the prospective subcontract cost estimate submitted by the Contractor; provided, that the actual subcontract price was not itself affected by defective cost or pricing data.
- (c)(1) If the Contracting Officer determines under paragraph (a) of this clause that a price or cost reduction should be made, the Contractor agrees not to raise the following matters as a defense:
- (i) The Contractor or subcontractor was a sole source supplier or otherwise was in a superior bargaining position and thus the price of the contract would not have been modified even if accurate, complete, and current cost or pricing data had been submitted.
 - (ii) The Contracting Officer should have known that the cost or pricing data in issue were defective even though the Contractor or subcontractor took no affirmative action to bring the character of the data to the attention of the Contracting Officer.
 - (iii) The contract was based on an agreement about the total cost of the contract and there was no agreement about the cost of each item procured under the contract.
 - (iv) The Contractor or subcontractor did not submit a Certificate of Current Cost or Pricing Data.
- (2)(i) Except as prohibited by subdivision (c)(2)(ii) of this clause, an offset in an amount determined appropriate by the Contracting Officer based upon the facts shall be allowed against the amount of a contract price reduction if—
- (A) The Contractor certifies to the Contracting Officer that, to the best of the Contractor's knowledge and belief, the Contractor is entitled to the offset in the amount requested; and
 - (B) The Contractor proves that the cost or pricing data were available before the "as of" date specified on its Certificate of Current Cost or Pricing Data, and that the data were not submitted before such date.
- (ii) An offset shall not be allowed if—
- (A) The understated data were known by the Contractor to be understated before the "as of" date specified on its Certificate of Current Cost or Pricing Data; or
 - (B) The Government proves that the facts demonstrate that the contract price would not have increased in the amount to be offset even if the available data had been submitted before the "as of" date specified on its Certificate of Current Cost or Pricing Data.
- (d) If any reduction in the contract price under this clause reduces the price of items for which payment was made prior to the date of the modification reflecting the price reduction, the Contractor shall be liable to and shall pay the United States at the time such overpayment is repaid—
- (1) Simple interest on the amount of such overpayment to be computed from the date(s) of overpayment to the Contractor to the date the Government is repaid by the Contractor at the applicable underpayment rate effective for each quarter prescribed by the Secretary of the Treasury under 26 U.S.C. 6621(a)(2); and
 - (2) A penalty equal to the amount of the overpayment, if the Contractor or subcontractor knowingly submitted cost or pricing data that were incomplete, inaccurate, or noncurrent.

I.14 52.215-12 SUBCONTRACTOR COST OR PRICING DATA. (OCT 1997)

- (a) Before awarding any subcontract expected to exceed the threshold for submission of cost or pricing data at FAR 15.403-4, on the date of agreement on price or the date of award, whichever is later; or before pricing any subcontract modification involving a pricing adjustment expected to exceed the threshold for submission of cost or pricing data at FAR 15.403-4, the Contractor shall require the subcontractor to submit cost or pricing data (actually or by specific identification in writing), unless an exception under FAR 15.403-1 applies.
- (b) The Contractor shall require the subcontractor to certify in substantially the form prescribed in FAR 15.406-2 that, to the best of its knowledge and belief, the data submitted under paragraph (a) of this clause were accurate, complete, and current as of the date of agreement on the negotiated price of the subcontract or subcontract modification.
- (c) In each subcontract that exceeds the threshold for submission of cost or pricing data at FAR 15.403-4, when entered into, the Contractor shall insert either—
 - (1) The substance of this clause, including this paragraph (c), if paragraph (a) of this clause requires submission of cost or pricing data for the subcontract; or
 - (2) The substance of the clause at FAR 52.215-13, Subcontractor Cost or Pricing Data—Modifications.

I.15 52.215-15 TERMINATION OF DEFINED BENEFIT PENSION PLANS (OCT 1997)

The contractor shall promptly notify the Contracting Officer in writing when it determines that it will terminate a defined benefit pension plan or otherwise recapture such pension fund assets. If pension fund assets revert to the contractor or are constructively received by it under a termination or otherwise, the contractor shall make a refund or give a credit to the Government for its equitable share as required by FAR 31.205-6(j)(4). The contractor shall include the substance of this clause in all subcontracts under this contract that meet the applicability requirement of FAR 15.408(g).

I.16 52.215-18 REVERSION OR ADJUSTMENT OF PLANS FOR POSTRETIREMENT BENEFITS (PRB) OTHER THAN PENSIONS. (OCT 1997)

The Contractor shall promptly notify the Contracting Officer in writing when it determines that it will terminate or reduce a PRB plan. If PRB fund assets revert, or inure, to the Contractor or are constructively received by it under a plan termination or otherwise, the Contractor shall make a refund or give a credit to the Government for its equitable share as required by FAR 31.205-6(o)(6). The Contractor shall include the substance of this clause in all subcontracts under this contract that meet the applicability requirements of FAR 15.408(j).

I.17 52.216-221 INDEFINITE QUANTITY (OCT 1995)

- (a) This is an indefinite-quantity contract for the supplies or services specified, and effective for the period stated, in the Schedule. The quantities of supplies and services specified in the Schedule are estimates only and are not purchased by this contract.
- (b) Delivery or performance shall be made only as authorized by orders issued in accordance with the Ordering clause. The Contractor shall furnish to the Government, when and if ordered, the supplies or services specified in the Schedule up to and including the quantity designated in the Schedule as the "maximum." The Government shall order at least the quantity of supplies or services designated in the Schedule as the "minimum."
- (c) Except for any limitations on quantities in the Order Limitations clause or in the Schedule, there is no limit on the number of orders that may be issued. The Government may issue orders requiring delivery to multiple destinations or performance at multiple locations.

- (d) Any order issued during the effective period of this contract and not completed within that period shall be completed by the Contractor within the time specified in the order. The contract shall govern the Contractor's and Government's rights and obligations with respect to that order to the same extent as if the order were completed during the contract's effective period; provided, that the Contractor shall not be required to make any deliveries under this contract more than six (6) months after the contract completion date.

I.18 52.217-8 OPTIONS TO EXTEND SERVICES (AUG 1989)

The Government may require continued performance of any services within the limits and at the rates specified in the contract. These rates may be adjusted only as a result of revisions to prevailing labor rates provided by the Secretary of Labor. The option provision may be exercised more than once, but the total extension of performance hereunder shall not exceed 6 months. The Contracting Officer may exercise the option by written notice to the contractor within the period specified in the Schedule.

I.19 52.219-8 UTILIZATION OF SMALL, SMALL DISADVANTAGED AND WOMEN-OWNED SMALL BUSINESS CONCERNS. (JUN 1997)

- (a) It is the policy of the United States that small business concerns, small business concerns owned and controlled by socially and economically disadvantaged individuals and small business concerns owned and controlled by women shall have the maximum practicable opportunity to participate in performing contracts let by any Federal agency, including contracts and subcontracts for subsystems, assemblies, components, and related services for major systems. It is further the policy of the United States that its prime contractors establish procedures to ensure the timely payment of amounts due pursuant to the terms of their subcontracts with small business concerns, small business concerns owned and controlled by socially and economically disadvantaged individuals and small business concerns owned and controlled by women.
- (b) The Contractor hereby agrees to carry out this policy in the awarding of subcontracts to the fullest extent consistent with efficient contract performance. The Contractor further agrees to cooperate in any studies or surveys as may be conducted by the United States Small Business Administration or the awarding agency of the United States as may be necessary to determine the extent of the Contractor's compliance with this clause.
- (c) As used in this contract, the term "small business concern" shall mean a small business as defined pursuant to section 3 of the Small Business Act and relevant regulations promulgated pursuant thereto. The term "small business concern owned and controlled by socially and economically disadvantaged individuals" shall mean a small business concern (1) which is at least 51 percent unconditionally owned by one or more socially and economically disadvantaged individuals; or, in the case of any publicly owned business, at least 51 per cent of the stock of which is unconditionally owned by one or more socially and economically disadvantaged individuals; and (2) whose management and daily business operations are controlled by one or more of such individuals. This term also means a small business concern that is at least 51 percent unconditionally owned by an economically disadvantaged Indian tribe or Native Hawaiian Organization, or a publicly owned business having at least 51 percent of its stock unconditionally owned by one of these entities which has its management and daily business controlled by members of an economically disadvantaged Indian tribe or Native Hawaiian Organization, and which meets the requirements of 13 CFR 124. The Contractor shall presume that socially and economically disadvantaged individuals include Black Americans, Hispanic Americans, Native Americans, Asian-Pacific Americans, Subcontinent Asian Americans, and other minorities, or any other individual found to be disadvantaged by the Administration pursuant to section 8(a) of the Small Business Act. The Contractor shall presume that socially and economically disadvantaged entities also include Indian Tribes and Native Hawaiian Organizations.
- (d) The term "small business concern owned and controlled by women" shall mean a small business concern -
- (1) Which is at least 51 percent owned by one or more women, or, in the case of any publicly owned business, at least 51 percent of the stock of which is owned by one or more women; and

- (2) Whose management and daily business operations are controlled by one or more women; and
- (e) Contractors acting in good faith may rely on written representations by their subcontractors regarding their status as a small business concern, a small business concern owned and controlled by socially and economically disadvantaged individuals or a small business concern owned and controlled by women.

L.20 52.222-1 NOTICE TO THE GOVERNMENT OF LABOR DISPUTES. (FEB 1997)

If the Contractor has knowledge that any actual or potential labor dispute is delaying or threatens to delay the timely performance of this contract, the Contractor shall immediately give notice, including all relevant information, to the Contracting Officer.

L.21 52.222-3 CONVICT LABOR. (AUG 1996)

The Contractor agrees not to employ in the performance of this contract any person undergoing a sentence of imprisonment which has been imposed by any court of a State, the District of Columbia, the Commonwealth of Puerto Rico, the Virgin Islands, Guam, American Samoa, the Commonwealth of the Northern Mariana Islands, or the Trust Territory of the Pacific Islands. This limitation, however, shall not prohibit the employment by the Contractor in the performance of this contract of persons on parole or probation to work at paid employment during the term of their sentence or persons who have been pardoned or who have served their terms. Nor shall it prohibit the employment by the Contractor in the performance of this contract of persons confined for violation of the laws of any of the States, the District of Columbia, the Commonwealth of Puerto Rico, the Virgin Islands, Guam, American Samoa, the Commonwealth of the Northern Mariana Islands, or the Trust Territory of the Pacific Islands who are authorized to work at paid employment in the community under the laws of such jurisdiction, if -

- (a)(1) The worker is paid or is in an approved work training program on a voluntary basis;
- (2) Representatives of local union central bodies or similar labor union organizations have been consulted;
- (3) Such paid employment will not result in the displacement of employed workers, or be applied in skills, crafts, or trades in which there is a surplus of available gainful labor in the locality, or impair existing contracts for services; and
- (4) The rates of pay and other conditions of employment will not be less than those paid or provided for work of a similar nature in the locality in which the work is being performed; and
- (b) The Attorney General of the United States has certified that the work-release laws or regulations of the jurisdiction involved are in conformity with the requirements of Executive Order 11755, as amended by Executive Orders 12608 and 12943.

I.22 52.222-4 CONTRACT WORK HOURS AND SAFETY STANDARDS ACT - OVERTIME COMPENSATION. (JUL 1995)

- (a) Overtime requirements. No Contractor or subcontractor contracting for any part of the contract work which may require or involve the employment of laborers or mechanics (see Federal Acquisition Regulation (FAR) 22.300) shall require or permit any such laborers or mechanics in any workweek in which the individual is employed on such work to work in excess of 40 hours in such workweek unless such laborer or mechanic receives compensation at a rate not less than 1 1/2 times the basic rate of pay for all hours worked in excess of 40 hours in such workweek.
- (b) Violation; liability for unpaid wages; liquidated damages. In the event of any violation of the provisions set forth in paragraph (a) of this clause, the Contractor and any subcontractor responsible therefor shall be liable for the unpaid wages. In addition, such Contractor and subcontractor shall be liable to the United States (in the case of work done under contract for the District of Columbia or a territory, to such District or to such territory), for liquidated damages. Such liquidated damages shall be computed with respect to each individual laborer or mechanic employed in violation of the provisions

set forth in paragraph (a) of this clause in the sum of \$10 for each calendar day on which such individual was required or permitted to work in excess of the standard workweek of 40 hours without payment of the overtime wages required by provisions set forth in paragraph (a) of this clause.

- (c) Withholding for unpaid wages and liquidated damages. The Contracting Officer shall upon his or her own action or upon written request of an authorized representative of the Department of Labor withhold or cause to be withheld, from any moneys payable on account of work performed by the Contractor or subcontractor under any such contract or any other Federal contract with the same Prime Contractor, or any other federally assisted contract subject to the Contract Work Hours and Safety Standards Act which is held by the same Prime Contractor, such sums as may be determined to be necessary to satisfy any liabilities of such Contractor or subcontractor for unpaid wages and liquidated damages as provided in the provisions set forth in paragraph (b) of this clause.
- (d) Payrolls and basic records.
 - (1) The Contractor or subcontractor shall maintain payrolls and basic payroll records during the course of contract work and shall preserve them for a period of 3 years from the completion of the contract for all laborers and mechanics working on the contract. Such records shall contain the name and address of each such employee, social security number, correct classifications, hourly rates of wages paid, daily and weekly number of hours worked, deductions made, and actual wages paid. Nothing in this paragraph shall require the duplication of records required to be maintained for construction work by Department of Labor regulations at 29 CFR 5.5(a)(3) implementing the Davis-Bacon Act.
 - (2) The records to be maintained under paragraph (d)(1) of this clause shall be made available by the Contractor or subcontractor for inspection, copying, or transcription by authorized representatives of the Contracting Officer or the Department of Labor. The Contractor or subcontractor shall permit such representatives to interview employees during working hours on the job.
- (e) Subcontracts. The Contractor or subcontractor shall insert in any subcontracts exceeding \$100,000 the provisions set forth in paragraphs (a) through (e) of this clause and also a clause requiring the subcontractors to include these provisions in any lower tier subcontracts. The Prime Contractor shall be responsible for compliance by any subcontractor or lower tier subcontractor with the provisions set forth in paragraphs (a) through (e) of this clause.

I.23 52.222-26 EQUAL OPPORTUNITY. (APR 1984)

- (a) If, during any 12-month period (including the 12 months preceding the award of this contract), the Contractor has been or is awarded nonexempt Federal contracts and/or subcontracts that have an aggregate value in excess of \$10,000, the Contractor shall comply with subparagraphs (b)(1) through (11) below. Upon request, the Contractor shall provide information necessary to determine the applicability of this clause.
- (b) During performing this contract, the Contractor agrees as follows:
 - (1) The Contractor shall not discriminate against any employee or applicant for employment because of race, color, religion, sex, or national origin.
 - (2) The Contractor shall take affirmative action to ensure that applicants are employed, and that employees are treated during employment, without regard to their race, color, religion, sex, or national origin. This shall include, but not be limited to -
 - (i) Employment;
 - (ii) Upgrading;
 - (iii) Demotion;
 - (iv) Transfer;

- (v) Recruitment or recruitment advertising;
 - (vi) Layoff or termination;
 - (vii) Rates of pay or other forms of compensation; and
 - (viii) Selection for training, including apprenticeship.
- (3) The Contractor shall post in conspicuous places available to employees and applicants for employment the notices to be provided by the Contracting Officer that explain this clause.
 - (4) The Contractor shall, in all solicitations or advertisement for employees placed by or on behalf of the Contractor, state that all qualified applicants will receive consideration for employment without regard to race, color, religion, sex, or national origin.
 - (5) The Contractor shall send, to each labor union or representative of workers with which it has a collective bargaining agreement or other contract or understanding, the notice to be provided by the Contracting Officer advising the labor union or workers' representative of the Contractor's commitments under this clause, and post copies of the notice in conspicuous places available to employees and applicants for employment.
 - (6) The Contractor shall comply with Executive Order 11246, as amended, and the rules, regulations, and orders of the Secretary of Labor.
 - (7) The Contractor shall furnish to the contracting agency all information required by Executive Order 11246, as amended, and by the rules, regulations, and orders of the Secretary of Labor. Standard Form 100 (EEO-1), or any successor form, is the prescribed form to be filed within 30 days following the award, unless filed within 12 months preceding the date of award.
 - (8) The Contractor shall permit access to its books, records, and accounts by the contracting agency or the Office of Federal Contract Compliance Programs (OFCCP) for the purposes of investigation to ascertain the Contractor's compliance with the applicable rules, regulations, and orders.
 - (9) If the OFCCP determines that the Contractor is not in compliance with this clause or any rule, regulation, or order of the Secretary of Labor, this contract may be canceled, terminated, or suspended in whole or in part and the Contractor may be declared ineligible for further Government contracts, under the procedures authorized in Executive Order 11246, as amended. In addition, sanctions may be imposed and remedies invoked against the Contractor as provided in Executive Order 11246, as amended, the rules, regulations, and orders of the Secretary of Labor, or as otherwise provided by law.
 - (10) The Contractor shall include the terms and conditions of subparagraph (b)(1) through (11) of this clause in every subcontract or purchase order that is not exempted by the rules, regulations, or orders of the Secretary of Labor issued under Executive Order 11246, as amended, so that these terms and conditions will be binding upon each subcontractor or vendor.
 - (11) The Contractor shall take such action with respect to any subcontract or purchase order as the contracting agency may direct as a means of enforcing these terms and conditions, including sanctions for noncompliance; provided, that if the Contractor becomes involved in, or is threatened with, litigation with a subcontractor or vendor as a result of any direction, the Contractor may request the United States to enter into the litigation to protect the interests of the United States.
- (c) Notwithstanding any other clause in this contract, disputes relative to this clause will be governed by the procedures in 41 CFR 60-1.1.

I.24 52.222-28 EQUAL OPPORTUNITY PREAWARD CLEARANCE OF SUBCONTRACTS. (APR 1984)

Notwithstanding the clause of this contract entitled "Subcontracts," the Contractor shall not enter into a first-tier subcontract for an estimated or actual amount of \$1 million or more without obtaining in writing from the Contracting Officer a clearance that the proposed subcontractor is in compliance with equal opportunity requirements and therefore is eligible for award.

I.25 52.222-35 AFFIRMATIVE ACTION FOR DISABLED VETERANS AND VETERANS OF THE VIETNAM ERA. (APR 1998)

(a) Definitions. As used in this clause -

All employment openings includes all positions except executive and top management, those positions that will be filled from within the contractor's organization, and positions lasting 3 days or less. This term includes full-time employment, temporary employment of more than 3 days' duration, and part-time employment.

Appropriate office of the State employment service system means the local office of the Federal-State national system of public employment offices with assigned responsibility to serve the area where the employment opening is to be filled, including the District of Columbia, Guam, the Commonwealth of Puerto Rico, and the Virgin Islands.

Positions that will be filled from within the Contractor's organization means employment openings for which no consideration will be given to persons outside the Contractor's organization (including any affiliates, subsidiaries, and parent companies) and includes any openings that the Contractor proposes to fill from regularly established "recall" lists. The exception does not apply to a particular opening once an employer decides to consider applicants outside of its organization.

Veteran of the Vietnam era means a person who -

- (1) Served on active duty for a period of more than 180 days, any part of which occurred between August 5, 1964, and May 7, 1975, and was discharged or released therefrom with other than a dishonorable discharge; or
- (2) Was discharged or released from active duty for a service-connected disability if any part of such active duty was performed between August 5, 1964, and May 7, 1975.

(b) General.

- (1) Regarding any position for which the employee or applicant for employment is qualified, the Contractor shall not discriminate against the individual because the individual is a disabled veteran or a veteran of the Vietnam era. The Contractor agrees to take affirmative action to employ, advance in employment, and otherwise treat qualified disabled veterans and veterans of the Vietnam era without discrimination based upon their disability or veterans' status in all employment practices such as -

- (i) Employment;
- (ii) Upgrading;
- (iii) Demotion or transfer;
- (iv) Recruitment;
- (v) Advertising;
- (vi) Layoff or termination;

- (vii) Rates of pay or other forms of compensation; and
 - (viii) Selection for training, including apprenticeship.
- (2) The Contractor agrees to comply with the rules, regulations, and relevant orders of the Secretary of Labor (Secretary) issued under the Vietnam Era Veterans' Readjustment Assistance Act of 1972 (the Act), as amended.
- (c) Listing openings.
 - (1) The Contractor agrees to list all employment openings existing at contract award or occurring during contract performance, at an appropriate office of the State employment service system in the locality where the opening occurs. These openings include those occurring at any Contractor facility, including one not connected with performing this contract. An independent corporate affiliate is exempt from this requirement.
 - (2) State and local government agencies holding Federal contracts of \$10,000 or more shall also list all openings with the appropriate office of the State employment service.
 - (3) The listing of employment openings with the State employment service system is required at least concurrently with using any other recruitment source or effort and involves the obligations of placing a bona fide job order, including accepting referrals of veterans and nonveterans. This listing does not require hiring any particular job applicant or hiring from any particular group of job applicants and is not intended to relieve the Contractor from any requirements of Executive orders or regulations concerning nondiscrimination in employment.
 - (4) Whenever the Contractor becomes contractually bound to the listing terms of this clause, it shall advise the State employment service system, in each State where it has establishments, of the name and location of each hiring location in the State. As long as the Contractor is contractually bound to these terms and has so advised the State system, it need not advise the State system of subsequent contracts. The Contractor may advise the State system when it is no longer bound by this contract clause.
- (d) Applicability. This clause does not apply to the listing of employment openings that occur and are filled outside the 50 States, the District of Columbia, the Commonwealth of Puerto Rico, Guam, and the Virgin Islands.
- (e) Postings.
 - (1) The Contractor agrees to post employment notices stating -
 - (i) The Contractor's obligation under the law to take affirmative action to employ and advance in employment qualified disabled veterans and veterans of the Vietnam era; and
 - (ii) The rights of applicants and employees.
 - (2) These notices shall be posted in conspicuous places that are available to employees and applicants for employment. They shall be in a form prescribed by the Deputy Assistant Secretary for Federal Contract Compliance Programs, Department of Labor (Deputy Assistant Secretary), and provided by or through the Contracting Officer.
 - (3) The Contractor shall notify each labor union or representative of workers with which it has a collective bargaining agreement or other contract understanding, that the Contractor is bound by the terms of the Act, and is committed to take affirmative action to employ, and advance in employment, qualified disabled veterans and veterans of the Vietnam era.
- (f) Noncompliance. If the Contractor does not comply with the requirements of this clause, appropriate actions may be taken under the rules, regulations, and relevant orders of the Secretary issued pursuant to the Act.

- (g) Subcontracts. The Contractor shall include the terms of this clause in every subcontract or purchase order of \$10,000 or more unless exempted by rules, regulations, or orders of the Secretary. The Contractor shall act as specified by the Deputy Assistant Secretary to enforce the terms, including action for noncompliance.

I.26 52.222-36 AFFIRMATIVE ACTION FOR HANDICAPPED WORKERS. (JUN 1998)

(a) General.

- (1) Regarding any position for which the employee or applicant for employment is qualified, the Contractor shall not discriminate against any employee or applicant because of physical or mental disability. The Contractor agrees to take affirmative action to employ, advance in employment, and otherwise treat qualified individuals with disabilities without discrimination based upon their physical or mental disability in all employment practices such as:
- (i) Recruitment, advertising, and job application procedures;
 - (ii) Hiring, upgrading, promotion, award of tenure, demotion, transfer, layoff, termination, right of return from layoff, and rehiring;
 - (iii) Rates of pay or any other form of compensation and changes in compensation;
 - (iv) Job assignments, job classifications, organizational structures, position descriptions, lines of progression, and seniority lists;
 - (v) Leaves of absence, sick leave, or any other leave;
 - (vi) Fringe benefits available by virtue of employment, whether or not administered by the Contractor;
 - (vii) Selection and financial support for training, including apprenticeships, professional meetings, conferences, and other related activities, and selection for leaves of absence to pursue training;
 - (viii) Activities sponsored by the Contractor, including social or recreational programs; and
 - (ix) Any other term, condition, or privilege of employment.
- (2) The Contractor agrees to comply with the rules, regulations, and relevant orders of the Secretary of Labor (Secretary) issued under the Rehabilitation Act of 1973 (29 U.S.C. 793) (the Act), as amended.

(b) Postings.

- (1) The Contractor agrees to post employment notices stating:
- (i) The Contractor's obligation under the law to take affirmative action to employ and advance in employment qualified individuals with disabilities; and
 - (ii) The rights of applicants and employees.
- (2) These notices shall be posted in conspicuous places that are available to employees and applicants for employment. The Contractor shall ensure that applicants and employees with disabilities are informed of the contents of the notice (e.g., the Contractor may have the notice read to a visually disabled individual, or may lower the posted notice so that it might be read by a person in a wheelchair). The notices shall be in a form prescribed by the Deputy Assistant Secretary for Federal Contract Compliance of the U.S. Department of Labor (Deputy Assistant Secretary) and shall be provided by or through the Contracting Officer.

- (3) The Contractor shall notify each labor union or representative of workers with which it has a collective bargaining agreement or other contract understanding, that the Contractor is bound by the terms of Section 503 of the Act and is committed to take affirmative action to employ, and advance in employment, qualified individuals with physical or mental disabilities.
- (c) Noncompliance. If the Contractor does not comply with the requirements of this clause, appropriate actions may be taken under the rules, regulations, and relevant orders of the Secretary issued pursuant to the Act.
- (d) Subcontracts. The Contractor shall include the terms of this clause in every subcontract or purchase order in excess of \$10,000 unless exempted by rules, regulations, or orders of the Secretary. The Contractor shall act as specified by the Deputy Assistant Secretary to enforce the terms, including action for noncompliance.

I.27 52.222-37 EMPLOYMENT REPORTS ON DISABLED VETERANS AND VETERANS OF THE VIETNAM ERA. (APR 1998)

- (a) The contractor shall report at least annually, as required by the Secretary of Labor, on:
 - (1) The number of disabled veterans and the number of veterans of the Vietnam era in the workforce of the contractor by job category and hiring location; and
 - (2) The total number of new employees hired during the period covered by the report, and of that total, the number of disabled veterans, and the number of veterans of the Vietnam era.
- (b) The above items shall be reported by completing the form entitled "Federal Contractor Veterans' Employment Report VETS-100."
- (c) Reports shall be submitted no later than March 31 of each year beginning March 31, 1988.
- (d) The employment activity report required by paragraph (a)(2) of this clause shall reflect total hires during the most recent 12-month period as of the ending date selected for the employment profile report required by paragraph (a)(1) of this clause. Contractors may select an ending date:
 - (1) As of the end of any pay period during the period January through March 1st of the year the report is due, or
 - (2) As of December 31, if the contractor has previous written approval from the Equal Employment Opportunity Commission to do so for purposes of submitting the Employer Information Report EEO-1 (Standard Form 100).
- (e) The count of veterans reported according to paragraph (a) of this clause shall be based on voluntary disclosure. Each Contractor subject to the reporting requirements at 38 U.S.C. 4212 shall invite all disabled veterans and veterans of the Vietnam era who wish to benefit under the affirmative action program at 38 U.S.C. 4212 to identify themselves to the Contractor. The invitation shall state that the information is voluntarily provided; that the information will be kept confidential; that disclosure or refusal to provide the information will not subject the applicant or employee to any adverse treatment; and that the information will be used only in accordance with the regulations promulgated under 38 U.S.C. 4212.
- (f) Subcontracts. The Contractor shall include the terms of this clause in every subcontract or purchase order of \$10,000 or more unless exempted by rules, regulations, or orders of the Secretary.

I.28 52.222-41 SERVICE CONTRACT ACT OF 1965, AS AMENDED. (MAY 1989)

- (a) Definitions. "Act," as used in this clause, means the Service Contract Act of 1965, as amended (41 U.S.C. 351, et seq.).

"Contractor," as used in this clause or in any subcontract, shall be deemed to refer to the subcontractor, except in the term "Government Prime Contractor."

"Service employee," as used in this clause, means any person engaged in the performance of this contract other than any person employed in a bona fide executive, administrative, or professional capacity, as these terms are defined in Part 541 of Title 29, Code of Federal Regulations, as revised. It includes all such persons regardless of any contractual relationship that may be alleged to exist between a Contractor or subcontractor and such persons.

- (b) **Applicability.** This contract is subject to the following provisions and to all other applicable provisions of the Act and regulations of the Secretary of Labor (29 CFR Part 4). This clause does not apply to contracts or subcontracts administratively exempted by the Secretary of Labor or exempted by 41 U.S.C. 356, as interpreted in Subpart C of 29 CFR Part 4.
- (c) **Compensation.**
 - (1) Each service employee employed in the performance of this contract by the Contractor or any subcontractor shall be paid not less than the minimum monetary wages and shall be furnished fringe benefits in accordance with the wages and fringe benefits determined by the Secretary of Labor, or authorized representative, as specified in any wage determination attached to this contract.
 - (2)(i) If a wage determination is attached to this contract, the Contractor shall classify any class of service employee which is not listed therein and which is to be employed under the contract (i.e., the work to be performed is not performed by any classification listed in the wage determination) so as to provide a reasonable relationship (i.e., appropriate level of skill comparison) between such unlisted classifications and the classifications listed in the wage determination. Such conformed class of employees shall be paid the monetary wages and furnished the fringe benefits as are determined pursuant to the procedures in this paragraph (c).
 - (ii) This conforming procedure shall be initiated by the Contractor prior to the performance of contract work by the unlisted class of employee. The Contractor shall submit Standard Form (SF) 1444, Request For Authorization of Additional Classification and Rate, to the Contracting Officer no later than 30 days after the unlisted class of employee performs any contract work. The Contracting Officer shall review the proposed classification and rate and promptly submit the completed SF 1444 (which must include information regarding the agreement or disagreement of the employees' authorized representatives or the employees themselves together with the agency recommendation), and all pertinent information to the Wage and Hour Division, Employment Standards Administration, U.S. Department of Labor. The Wage and Hour Division will approve, modify, or disapprove the action or render a final determination in the event of disagreement within 30 days of receipt or will notify the Contracting Officer within 30 days of receipt that additional time is necessary.
 - (iii) The final determination of the conformance action by the Wage and Hour Division shall be transmitted to the Contracting Officer who shall promptly notify the Contractor of the action taken. Each affected employee shall be furnished by the Contractor with a written copy of such determination or it shall be posted as a part of the wage determination.
 - (iv)(A) The process of establishing wage and fringe benefit rates that bear a reasonable relationship to those listed in a wage determination cannot be reduced to any single formula. The approach used may vary from wage determination to wage determination depending on the circumstances. Standard wage and salary administration practices which rank various job classifications by pay grade pursuant to point schemes or other job factors may, for example, be relied upon. Guidance may also be obtained from the way different jobs are rated under Federal pay systems (Federal Wage Board Pay System and the General Schedule) or from other wage

determinations issued in the same locality. Basic to the establishment of any conformable wage rate(s) is the concept that a pay relationship should be maintained between job classifications based on the skill required and the duties performed.

- (B) In the case of a contract modification, an exercise of an option, or extension of an existing contract, or in any other case where a Contractor succeeds a contract under which the classification in question was previously conformed pursuant to paragraph (c) of this clause, a new conformed wage rate and fringe benefits may be assigned to the conformed classification by indexing (i.e., adjusting) the previous conformed rate and fringe benefits by an amount equal to the average (mean) percentage increase (or decrease, where appropriate) between the wages and fringe benefits specified for all classifications to be used on the contract which are listed in the current wage determination, and those specified for the corresponding classifications in the previously applicable wage determination. Where conforming actions are accomplished in accordance with this paragraph prior to the performance of contract work by the unlisted class of employees, the Contractor shall advise the Contracting Officer of the action taken but the other procedures in subdivision (c)(2)(ii) of this clause need not be followed.
- (C) No employee engaged in performing work on this contract shall in any event be paid less than the currently applicable minimum wage specified under section 6(a)(1) of the Fair Labor Standards Act of 1938, as amended.
- (v) The wage rate and fringe benefits finally determined under this subparagraph (c)(2) of this clause shall be paid to all employees performing in the classification from the first day on which contract work is performed by them in the classification. Failure to pay the unlisted employees the compensation agreed upon by the interested parties and/or finally determined by the Wage and Hour Division retroactive to the date such class of employees commenced contract work shall be a violation of the Act and this contract.
- (vi) Upon discovery of failure to comply with subparagraph (c)(2) of this clause, the Wage and Hour Division shall make a final determination of conformed classification, wage rate, and/or fringe benefits which shall be retroactive to the date such class or classes of employees commenced contract work.
- (3) Adjustment of compensation. If the term of this contract is more than 1 year, the minimum monetary wages and fringe benefits required to be paid or furnished thereunder to service employees under this contract shall be subject to adjustment after 1 year and not less often than once every 2 years, under wage determinations issued by the Wage and Hour Division.
- (d) Obligation to furnish fringe benefits. The Contractor or subcontractor may discharge the obligation to furnish fringe benefits specified in the attachment or determined under subparagraph (c)(2) of this clause by furnishing equivalent combinations of bona fide fringe benefits, or by making equivalent or differential cash payments, only in accordance with Subpart D of 29 CFR Part 4.
- (e) Minimum wage. In the absence of a minimum wage attachment for this contract, neither the Contractor nor any subcontractor under this contract shall pay any person performing work under this contract (regardless of whether the person is a service employee) less than the minimum wage specified by section 6(a)(1) of the Fair Labor Standards Act of 1938. Nothing in this clause shall relieve the Contractor or any subcontractor of any other obligation under law or contract for payment of a higher wage to any employee.
- (f) Successor contracts. If this contract succeeds a contract subject to the Act under which substantially the same services were furnished in the same locality and service employees were paid wages and fringe benefits provided for in a collective bargaining agreement, in the absence of the minimum wage attachment for this contract setting forth such collectively bargained wage rates and fringe benefits, neither the Contractor nor any subcontractor under this contract shall pay any service employee

performing any of the contract work (regardless of whether or not such employee was employed under the predecessor contract), less than the wages and fringe benefits provided for in such collective bargaining agreement, to which such employee would have been entitled if employed under the predecessor contract, including accrued wages and fringe benefits and any prospective increases in wages and fringe benefits provided for under such agreement. No Contractor or subcontractor under this contract may be relieved of the foregoing obligation unless the limitations of 29 CFR 4.1b(b) apply or unless the Secretary of Labor or the Secretary's authorized representative finds, after a hearing as provided in 29 CFR 4.10 that the wages and/or fringe benefits provided for in such agreement are substantially at variance with those which prevail for services of a character similar in the locality, or determines, as provided in 29 CFR 4.11, that the collective bargaining agreement applicable to service employees employed under the predecessor contract was not entered into as a result of arm's length negotiations. Where it is found in accordance with the review procedures provided in 29 CFR 4.10 and/or 4.11 and Parts 6 and 8 that some or all of the wages and/or fringe benefits contained in a predecessor Contractor's collective bargaining agreement are substantially at variance with those which prevail for services of a character similar in the locality, and/or that the collective bargaining agreement applicable to service employees employed under the predecessor contract was not entered into as a result of arm's length negotiations, the Department will issue a new or revised wage determination setting forth the applicable wage rates and fringe benefits. Such determination shall be made part of the contract or subcontract, in accordance with the decision of the Administrator, the Administrative Law Judge, or the Board of Service Contract Appeals, as the case may be, irrespective of whether such issuance occurs prior to or after the award of a contract or subcontract (53 Comp. Gen. 401 (1973)). In the case of a wage determination issued solely as a result of a finding of substantial variance, such determination shall be effective as of the date of the final administrative decision.

- (g) Notification to employees. The Contractor and any subcontractor under this contract shall notify each service employee commencing work on this contract of the minimum monetary wage and any fringe benefits required to be paid pursuant to this contract, or shall post the wage determination attached to this contract. The poster provided by the Department of Labor (Publication WH 1313) shall be posted in a prominent and accessible place at the worksite. Failure to comply with this requirement is a violation of section 2(a)(4) of the Act and of this contract.
- (h) Safe and sanitary working conditions. The Contractor or subcontractor shall not permit any part of the services called for by this contract to be performed in buildings or surroundings or under working conditions provided by or under the control or supervision of the Contractor or subcontractor which are unsanitary, hazardous, or dangerous to the health or safety of the service employees. The Contractor or subcontractor shall comply with the safety and health standards applied under 29 CFR Part 1925.
- (i) Records.
 - (1) The Contractor and each subcontractor performing work subject to the Act shall make and maintain for 3 years from the completion of the work, and make them available for inspection and transcription by authorized representatives of the Wage and Hour Division, Employment Standards Administration, a record of the following:
 - (i) For each employee subject to the Act -
 - (A) Name and address and social security number;
 - (B) Correct work classification or classifications, rate or rates of monetary wages paid and fringe benefits provided, rate or rates of payments in lieu of fringe benefits, and total daily and weekly compensation;
 - (C) Daily and weekly hours worked by each employee; and
 - (D) Any deductions, rebates, or refunds from the total daily or weekly compensation of each employee.

- (ii) For those classes of service employees not included in any wage determination attached to this contract, wage rates or fringe benefits determined by the interested parties or by the Administrator or authorized representative under the terms of paragraph (c) of this clause. A copy of the report required by subdivision (c)(2)(ii) of this clause will fulfill this requirement.
 - (iii) Any list of the predecessor Contractor's employees which had been furnished to the Contractor as prescribed by paragraph (n) of this clause.
- (2) The Contractor shall also make available a copy of this contract for inspection or transcription by authorized representatives of the Wage and Hour Division.
- (3) Failure to make and maintain or to make available these records for inspection and transcription shall be a violation of the regulations and this contract, and in the case of failure to produce these records, the Contracting Officer, upon direction of the Department of Labor and notification to the Contractor, shall take action to cause suspension of any further payment or advance of funds until the violation ceases.
- (4) The Contractor shall permit authorized representatives of the Wage and Hour Division to conduct interviews with employees at the worksite during normal working hours.
- (i) Pay periods. The Contractor shall unconditionally pay to each employee subject to the Act all wages due free and clear and without subsequent deduction (except as otherwise provided by law or regulations, 29 CFR Part 4), rebate, or kickback on any account. These payments shall be made no later than one pay period following the end of the regular pay period in which the wages were earned or accrued. A pay period under this Act may not be of any duration longer than semi-monthly.
- (k) Withholding of payments and termination of contract. The Contracting Officer shall withhold or cause to be withheld from the Government Prime Contractor under this or any other Government contract with the Prime Contractor such sums as an appropriate official of the Department of Labor requests or such sums as the Contracting Officer decides may be necessary to pay underpaid employees employed by the Contractor or subcontractor. In the event of failure to pay any employees subject to the Act all or part of the wages or fringe benefits due under the Act, the Contracting Officer may, after authorization or by direction of the Department of Labor and written notification to the Contractor, take action to cause suspension of any further payment or advance of funds until such violations have ceased. Additionally, any failure to comply with the requirements of this clause may be grounds for termination of the right to proceed with the contract work. In such event, the Government may enter into other contracts or arrangements for completion of the work, charging the Contractor in default with any additional cost.
- (l) Subcontracts. The Contractor agrees to insert this clause in all subcontracts subject to the Act.
- (m) Collective bargaining agreements applicable to service employees. If wages to be paid or fringe benefits to be furnished any service employees employed by the Government Prime Contractor or any subcontractor under the contract are provided for in a collective bargaining agreement which is or will be effective during any period in which the contract is being performed, the Government Prime Contractor shall report such fact to the Contracting Officer, together with full information as to the application and accrual of such wages and fringe benefits, including any prospective increases, to service employees engaged in work on the contract, and a copy of the collective bargaining agreement. Such report shall be made upon commencing performance of the contract, in the case of collective bargaining agreements effective at such time, and in the case of such agreements or provisions or amendments thereof effective at a later time during the period of contract performance such agreements shall be reported promptly after negotiation thereof.
- (n) Seniority list. Not less than 10 days prior to completion of any contract being performed at a Federal facility where service employees may be retained in the performance of the succeeding contract and subject to a wage determination which contains vacation or other benefit provisions based upon length of service with a Contractor (predecessor) or successor (29 CFR 4.173), the incumbent Prime Contractor shall furnish the Contracting Officer a certified list of the names of all service employees

on the Contractor's or subcontractor's payroll during the last month of contract performance. Such list shall also contain anniversary dates of employment on the contract either with the current or predecessor Contractors of each such service employee. The Contracting Officer shall turn over such list to the successor Contractor at the commencement of the succeeding contract.

- (o) Rulings and interpretations. Rulings and interpretations of the Act are contained in Regulations, 29 CFR Part 4.
- (p) Contractor's certification.
 - (1) By entering into this contract, the Contractor (and officials thereof) certifies that neither it (nor he or she) nor any person or firm who has a substantial interest in the Contractor's firm is a person or firm ineligible to be awarded Government contracts by virtue of the sanctions imposed under section 5 of the Act.
 - (2) No part of this contract shall be subcontracted to any person or firm ineligible for award of a Government contract under section 5 of the Act.
 - (3) The penalty for making false statements is prescribed in the U.S. Criminal Code, 18 U.S.C. 1001.
- (q) Variations, tolerances, and exemptions involving employment. Notwithstanding any of the provisions in paragraphs (b) through (o) of this clause, the following employees may be employed in accordance with the following variations, tolerances, and exemptions, which the Secretary of Labor, pursuant to section 4(b) of the Act prior to its amendment by Pub. L. 92-473, found to be necessary and proper in the public interest or to avoid serious impairment of the conduct of Government business:
 - (1) Apprentices, student-learners, and workers whose earning capacity is impaired by age, physical or mental deficiency, or injury may be employed at wages lower than the minimum wages otherwise required by section 2(a)(1) or 2(b)(1) of the Act without diminishing any fringe benefits or cash payments in lieu thereof required under section 2(a)(2) of the Act, in accordance with the conditions and procedures prescribed for the employment of apprentices, student-learners, handicapped persons, and handicapped clients of sheltered workshops under section 14 of the Fair Labor Standards Act of 1938, in the regulations issued by the Administrator (29 CFR Parts 520, 521, 524, and 525).
 - (2) The Administrator will issue certificates under the Act for the employment of apprentices, student-learners, handicapped persons, or handicapped clients of sheltered workshops not subject to the Fair Labor Standards Act of 1938, or subject to different minimum rates of pay under the two acts, authorizing appropriate rates of minimum wages (but without changing requirements concerning fringe benefits or supplementary cash payments in lieu thereof), applying procedures prescribed by the applicable regulations issued under the Fair Labor Standards Act of 1938 (29 CFR Parts 520, 521, 524, and 525).
 - (3) The Administrator will also withdraw, annul, or cancel such certificates in accordance with the regulations in 29 CFR Parts 525 and 528.
- (r) Apprentices. Apprentices will be permitted to work at less than the predetermined rate for the work they perform when they are employed and individually registered in a bona fide apprenticeship program registered with a State Apprenticeship Agency which is recognized by the U.S. Department of Labor, or if no such recognized agency exists in a State, under a program registered with the Bureau of Apprenticeship and Training, Employment and Training Administration, U.S. Department of Labor. Any employee who is not registered as an apprentice in an approved program shall be paid the wage rate and fringe benefits contained in the applicable wage determination for the journeyman classification of work actually performed. The wage rates paid apprentices shall not be less than the wage rate for their level of progress set forth in the registered program, expressed as the appropriate percentage of the journeyman's rate contained in the applicable wage determination. The allowable ratio of apprentices to journeymen employed on the contract work in any craft classification shall not be greater than the ratio permitted to the Contractor as to his entire work force under the registered program.

- (s) Tips. An employee engaged in an occupation in which the employee customarily and regularly receives more than \$30 a month in tips may have the amount of these tips credited by the employer against the minimum wage required by section 2(a)(1) or section 2(b)(1) of the Act, in accordance with section 3(m) of the Fair Labor Standards Act and Regulations, 29 CFR Part 531. However, the amount of credit shall not exceed \$1.34 per hour beginning January 1, 1981. To use this provision -
- (1) The employer must inform tipped employees about this tip credit allowance before the credit is utilized;
 - (2) The employees must be allowed to retain all tips (individually or through a pooling arrangement and regardless of whether the employer elects to take a credit for tips received);
 - (3) The employer must be able to show by records that the employee receives at least the applicable Service Contract Act minimum wage through the combination of direct wages and tip credit; and
 - (4) The use of such tip credit must have been permitted under any predecessor collective bargaining agreement applicable by virtue of section 4(c) of the Act.
- (t) Disputes concerning labor standards. The U.S. Department of Labor has set forth in 29 CFR Parts 4, 6, and 8 procedures for resolving disputes concerning labor standards requirements. Such disputes shall be resolved in accordance with those procedures and not the Disputes clause of this contract. Disputes within the meaning of this clause include disputes between the Contractor (or any of its subcontractors) and the contracting agency, the U.S. Department of Labor, or the employees or their representatives.

I.29 52.222-42 STATEMENT OF EQUIVALENT RATES FOR FEDERAL HIRES. (MAY 1989)

In compliance with the Service Contract Act of 1965, as amended, and the regulations of the Secretary of Labor (29 CFR Part 4), this clause identifies the classes of service employees expected to be employed under the contract and states the wages and fringe benefits payable to each if they were employed by the contracting agency subject to the provisions of 5 U.S.C. 5341 or 5332.

*This Statement is for Information Only:
It is not a Wage Determination*

Employee Class	Monetary Wage - Fringe Benefits
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[]	[]
[]	[]
[]	[]
[]	[]

I.30 52.222-43 FAIR LABOR STANDARDS ACT AND SERVICE CONTRACT ACT - PRICE ADJUSTMENT (MULTIPLE YEAR AND OPTION CONTRACTS). (MAY 1989)

- (a) This clause applies to both contracts subject to area prevailing wage determinations and contracts subject to collective bargaining agreements.
- (b) The Contractor warrants that the prices in this contract do not include any allowance for any contingency to cover increased costs for which adjustment is provided under this clause.
- (c) The wage determination, issued under the Service Contract Act of 1965, as amended, (41 U.S.C. 351, et seq.), by the Administrator, Wage and Hour Division, Employment Standards Administration, U.S. Department of Labor, current on the anniversary date of a multiple year contract or the beginning of each renewal option period, shall apply to this contract. If no such determination has been made applicable to this contract, then the Federal minimum wage as established by section 6(a)(1) of the Fair Labor Standards Act of 1938, as amended, (29 U.S.C. 206) current on the anniversary date of a multiple year contract or the beginning of each renewal option period, shall apply to this contract.

- (d) The contract price or contract unit price labor rates will be adjusted to reflect the Contractor's actual increase or decrease in applicable wages and fringe benefits to the extent that the increase is made to comply with or the decrease is voluntarily made by the Contractor as a result of:
 - (1) The Department of Labor wage determination applicable on the anniversary date of the multiple year contract, or at the beginning of the renewal option period. For example, the prior year wage determination required a minimum wage rate of \$4.00 per hour. The Contractor chose to pay \$4.10. The new wage determination increases the minimum rate to \$4.50 per hour. Even if the Contractor voluntarily increases the rate to \$4.75 per hour, the allowable price adjustment is \$.40 per hour;
 - (2) An increased or decreased wage determination otherwise applied to the contract by operation of law; or
 - (3) An amendment to the Fair Labor Standards Act of 1938 that is enacted after award of this contract, affects the minimum wage, and becomes applicable to this contract under law.
- (e) Any adjustment will be limited to increases or decreases in wages and fringe benefits as described in paragraph (c) of this clause, and the accompanying increases or decreases in social security and unemployment taxes and workers' compensation insurance, but shall not otherwise include any amount for general and administrative costs, overhead, or profit.
- (f) The Contractor shall notify the Contracting Officer of any increase claimed under this clause within 30 days after receiving a new wage determination unless this notification period is extended in writing by the Contracting Officer. The Contractor shall promptly notify the Contracting Officer of any decrease under this clause, but nothing in the clause shall preclude the Government from asserting a claim within the period permitted by law. The notice shall contain a statement of the amount claimed and any relevant supporting data, including payroll records, that the Contracting Officer may reasonably require. Upon agreement of the parties, the contract price or contract unit price labor rates shall be modified in writing. The Contractor shall continue performance pending agreement on or determination of any such adjustment and its effective date.
- (g) The Contracting Officer or an authorized representative shall have access to and the right to examine any directly pertinent books, documents, papers and records of the Contractor until the expiration of 3 years after final payment under the contract.

I.31 52.223-2 CLEAN AIR AND WATER. (APR 1984)

- (a) "Air Act," as used in this clause, means the Clean Air Act (42 U.S.C. 7401, et seq.).
- "Clean air standards," as used in this clause, means -
- (1) Any enforceable rules, regulations, guidelines, standards, limitations, orders, controls, prohibitions, work practices, or other requirements contained in, issued under, or otherwise adopted under the Air Act or Executive Order 11738;
 - (2) An applicable implementation plan as described in section 110(d) of the Air Act (42 U.S.C. 7410(d));
 - (3) An approved implementation procedure or plan under section 111(c) or section 111(d) of the Air Act (42 U.S.C. 7411(c) or (d)); or
 - (4) An approved implementation procedure under section 112(d) of the Air Act (42 U.S.C. 7412(d)).

"Clean water standards," as used in this clause, means any enforceable limitation, control, condition, prohibition, standard, or other requirement promulgated under the Water Act or contained in a permit issued to a discharger by the EPA or by a State under an approved program, as authorized by section 402 of the Water Act (33 U.S.C. 1342), or by local government to ensure compliance with pretreatment regulations as required by section 307 of the Water Act (33 U.S.C. 1317).

"Compliance," as used in this clause, means compliance with -

- (1) Clean air or water standards; or
- (2) A schedule or plan ordered or approved by a court of competent jurisdiction, the EPA, or an air or water pollution control agency under the requirements of the Air Act or Water Act and related regulations.

"Facility," as used in this clause, means any building, plant, installation, structure, mine, vessel or other floating craft, location, or site of operations, owned, leased, or supervised by a Contractor or subcontractor, used in the performance of a contract or subcontract. When a location or site of operations includes more than one building, plant, installation, or structure, the entire location or site shall be deemed a facility except when the Administrator, or a designee, of the EPA determines that independent facilities are collocated in one geographical area.

"Water Act," as used in this clause, means Clean Water Act (33 U.S.C. 1251, et seq.).

(b) The Contractor agrees -

- (1) To comply with the requirements of section 114 of the Clean Air Act (42 U.S.C. 7414) and section 308 of the Clean Water Act (33 U.S.C. 1318) relating to inspection, monitoring, entry, reports, and information, as well as other requirements specified in section 114 and section 308 of the Air Act and the Water Act, and all regulations and guidelines issued to implement those acts before the award of this contract;
- (2) That no portion of the work required by this prime contract will be performed in a facility listed on the EPA List of Violating Facilities on the date when this contract was awarded unless and until the EPA eliminates the name of the facility from the listing;
- (3) To use best efforts to comply with clean air standards and clean water standards at the facility in which the contract is being performed; and
- (4) To insert the substance of this clause into any nonexempt subcontract, including this subparagraph (b)(4).

I.32 52.223-3 HAZARDOUS MATERIAL IDENTIFICATION AND MATERIAL SAFETY DATA. (JAN 1997)

- (a) "Hazardous material," as used in this clause, includes any material defined as hazardous under the latest version of Federal Standard No. 313 (including revisions adopted during the term of the contract).
- (b) The offeror must list any hazardous material, as defined in paragraph (a) of this clause, to be delivered under this contract. The hazardous material shall be properly identified and include any applicable identification number, such as National Stock Number or Special Item Number. This information shall also be included on the Material Safety Data Sheet submitted under this contract.

MATERIAL

(If none, insert "None")	Identification No.
_____	_____
_____	_____
_____	_____

- (c) This list must be updated during performance of the contract whenever the Contractor determines that any other material to be delivered under this contract is hazardous.
- (d) The apparently successful offeror agrees to submit, for each item as required prior to award, a Material Safety Data Sheet, meeting the requirements of 29 CFR 1910.1200(g) and the latest version of Federal Standard No. 313, for all hazardous material identified in paragraph (b) of this clause. Data

shall be submitted in accordance with Federal Standard No. 313, whether or not the apparently successful offeror is the actual manufacturer of these items. Failure to submit the Material Safety Data Sheet prior to award may result in the apparently successful offeror being considered nonresponsible and ineligible for award.

- (e) If, after award, there is a change in the composition of the item(s) or a revision to Federal Standard No. 313, which renders incomplete or inaccurate the data submitted under paragraph (d) of this clause, the Contractor shall promptly notify the Contracting Officer and resubmit the data.
- (f) Neither the requirements of this clause nor any act or failure to act by the Government shall relieve the Contractor of any responsibility or liability for the safety of Government, Contractor, or subcontractor personnel or property.
- (g) Nothing contained in this clause shall relieve the Contractor from complying with applicable Federal, State, and local laws, codes, ordinances, and regulations (including the obtaining of licenses and permits) in connection with hazardous material.
- (h) The Government's rights in data furnished under this contract with respect to hazardous material are as follows:
 - (1) To use, duplicate and disclose any data to which this clause is applicable. The purposes of this right are to -
 - (i) Apprise personnel of the hazards to which they may be exposed in using, handling, packaging, transporting, or disposing of hazardous materials;
 - (ii) Obtain medical treatment for those affected by the material; and
 - (iii) Have others use, duplicate, and disclose the data for the Government for these purposes.
 - (2) To use, duplicate, and disclose data furnished under this clause, in accordance with subparagraph (h)(1) of this clause, in precedence over any other clause of this contract providing for rights in data.
 - (3) The Government is not precluded from using similar or identical data acquired from other sources.

I.33 52.223-6 DRUG-FREE WORKPLACE. (JAN 1997)

- (a) Definitions. As used in this clause -

"Controlled substance" means a controlled substance in schedules I through V of section 202 of the Controlled Substances Act (21 U.S.C. 812) and as further defined in regulation at 21 CFR 1308.11 - 1308.15.

"Conviction" means a finding of guilt (including a plea of nolo contendere) or imposition of sentence, or both, by any judicial body charged with the responsibility to determine violations of the Federal or State criminal drug statutes.

"Criminal drug statute" means a Federal or non-Federal criminal statute involving the manufacture, distribution, dispensing, possession, or use of any controlled substance.

"Drug-free workplace" means the site(s) for the performance of work done by the Contractor in connection with a specific contract at which employees of the Contractor are prohibited from engaging in the unlawful manufacture, distribution, dispensing, possession, or use of a controlled substance.

"Employee" means an employee of a Contractor directly engaged in the performance of work under a Government contract. "Directly engaged" is defined to include all direct cost employees and any other Contractor employee who has other than a minimal impact or involvement in contract performance.

"Individual" means an offeror/contractor that has no more than one employee including the offeror/contractor.

- (b) The Contractor, if other than an individual, shall - within 30 days after award (unless a longer period is agreed to in writing for contracts of 30 days or more performance duration), or as soon as possible for contracts of less than 30 days performance duration -
- (1) Publish a statement notifying its employees that the unlawful manufacture, distribution, dispensing, possession, or use of a controlled substance is prohibited in the Contractor's workplace and specifying the actions that will be taken against employees for violations of such prohibition;
 - (2) Establish an ongoing drug-free awareness program to inform such employees about -
 - (i) The dangers of drug abuse in the workplace;
 - (ii) The Contractor's policy of maintaining a drug-free workplace;
 - (iii) Any available drug counseling, rehabilitation, and employee assistance programs; and
 - (iv) The penalties that may be imposed upon employees for drug abuse violations occurring in the workplace;
 - (3) Provide all employees engaged in performance of the contract with a copy of the statement required by subparagraph (b)(1) of this clause;
 - (4) Notify such employees in writing in the statement required by subparagraph (b)(1) of this clause that, as a condition of continued employment on this contract, the employee will -
 - (i) Abide by the terms of the statement; and
 - (ii) Notify the employer in writing of the employee's conviction under a criminal drug statute for a violation occurring in the workplace no later than 5 days after such conviction;
 - (5) Notify the Contracting Officer in writing within 10 days after receiving notice under subdivision (b)(4)(ii) of this clause, from an employee or otherwise receiving actual notice of such conviction. The notice shall include the position title of the employee;
 - (6) Within 30 days after receiving notice under subdivision (b)(4)(ii) of this clause of a conviction, take one of the following actions with respect to any employee who is convicted of a drug abuse violation occurring in the workplace:
 - (i) Taking appropriate personnel action against such employee, up to and including termination; or
 - (ii) Require such employee to satisfactorily participate in a drug abuse assistance or rehabilitation program approved for such purposes by a Federal, State, or local health, law enforcement, or other appropriate agency; and
 - (7) Make a good faith effort to maintain a drug-free workplace through implementation of subparagraphs (b)(1) through (b)(6) of this clause.

- (c) The Contractor, if an individual, agrees by award of the contract or acceptance of a purchase order, not to engage in the unlawful manufacture, distribution, dispensing, possession, or use of a controlled substance while performing this contract.
- (d) In addition to other remedies available to the Government, the Contractor's failure to comply with the requirements of paragraph (b) or (c) of this clause may, pursuant to FAR 23.506, render the Contractor subject to suspension of contract payments, termination of the contract or default, and suspension or debarment.

I.34 52.223-10 WASTE REDUCTION PROGRAM. (OCT 1997)

- (a) Definition. "Waste reduction," as used in this clause, means preventing or decreasing the amount of waste being generated through waste prevention, recycling, or purchasing recycled and environmentally preferable products.
- (b) Consistent with the requirements of Section 701 of Executive Order 12873, the Contractor shall establish a program to promote cost-effective waste reduction in all operations and facilities covered by this contract. Any such program shall comply with applicable Federal, State, and local requirements, specifically including Section 6002 of the Resource Conservation and Recovery Act (42 U.S.C. 6901, et seq.) and implementing regulations.

I.35 52.223-14 TOXIC CHEMICAL RELEASE REPORTING. (OCT 1996)

- (a) Unless otherwise exempt, the Contractor, as owner or operator of a facility used in the performance of this contract, shall file by July 1 for the prior calendar year an annual Toxic Chemical Release Inventory Form (Form R) as described in sections 313(a) and (g) of the Emergency Planning and Community Right-to-Know Act of 1986 (EPCRA) (42 U.S.C. 11023(a) and (g)), and section 6607 of the Pollution Prevention Act of 1990 (PPA) (42 U.S.C. 13106). The Contractor shall file, for each facility subject to the Form R filing and reporting requirements, the annual Form R throughout the life of the contract.
- (b) A Contractor owned or operated facility used in the performance of this contract is exempt from the requirement to file an annual Form R if -
 - (1) The facility does not manufacture, process, or otherwise use any toxic chemicals listed under section 313(c) of EPCRA, 42 U.S.C. 11023(c);
 - (2) The facility does not have 10 or more full-time employees as specified in section 313(b)(1)(A) of EPCRA, 42 U.S.C. 11023(b)(1)(A);
 - (3) The facility does not meet the reporting thresholds of toxic chemicals established under section 313(f) of EPCRA, 42 U.S.C. 11023(f) (including the alternate thresholds at 40 CFR 372.27, provided an appropriate certification form has been filed with EPA);
 - (4) The facility does not fall within Standard Industrial Classification Code (SIC) designations 20 through 39 as set forth in section 19.102 of the Federal Acquisition Regulation (FAR); or
 - (5) The facility is not located within any State of the United States, the District of Columbia, the Commonwealth of Puerto Rico, Guam, American Samoa, the United States Virgin Islands, the Northern Mariana Islands, or any other territory or possession over which the United States has jurisdiction.
- (c) If the Contractor has certified to an exemption in accordance with one or more of the criteria in paragraph (b) of this clause, and after award of the contract circumstances change so that any of its owned or operated facilities used in the performance of this contract is no longer exempt -
 - (1) The Contractor shall notify the Contracting Officer; and
 - (2) The Contractor, as owner or operator of a facility used in the performance of this contract that is no longer exempt, shall -

- (i) Submit a Toxic Chemical Release Inventory Form (Form R) on or before July 1 for the prior calendar year during which the facility becomes eligible; and
 - (ii) Continue to file the annual Form R for the life of the contract for such facility.
- (d) The Contracting Officer may terminate this contract or take other action as appropriate, if the Contractor fails to comply accurately and fully with the EPCRA and PPA toxic chemical release filing and reporting requirements.
- (e) Except for acquisitions of commercial items as defined in FAR Part 2, the Contractor shall -
 - (1) For competitive subcontracts expected to exceed \$100,000 (including all options), include a solicitation provision substantially the same as the provision at FAR 52.223-13, Certification of Toxic Chemical Release Reporting; and
 - (2) Include in any resultant subcontract exceeding \$100,000 (including all options), the substance of this clause, except this paragraph (e).

I.36 52.224-1 PRIVACY ACT NOTIFICATION. (APR 1984)

The Contractor will be required to design, develop, or operate a system of records on individuals, to accomplish an agency function subject to the Privacy Act of 1974, Public Law 93-579, December 31, 1974 (5 U.S.C. 552a) and applicable agency regulations. Violation of the Act may involve the imposition of criminal penalties.

I.37 52.224-2 PRIVACY ACT. (APR 1984)

- (a) The Contractor agrees to -
 - (1) Comply with the Privacy Act of 1974 (the Act) and the agency rules and regulations issued under the Act in the design, development, or operation of any system of records on individuals to accomplish an agency function when the contract specifically identifies -
 - (i) The systems of records; and
 - (ii) The design, development, or operation work that the contractor is to perform;
 - (2) Include the Privacy Act notification contained in this contract in every solicitation and resulting subcontract and in every subcontract awarded without a solicitation, when the work statement in the proposed subcontract requires the redesign, development, or operation of a system of records on individuals that is subject to the Act; and
 - (3) Include this clause, including this subparagraph (3), in all subcontracts awarded under this contract which requires the design, development, or operation of such a system of records.
- (b) In the event of violations of the Act, a civil action may be brought against the agency involved when the violation concerns the design, development, or operation of a system of records on individuals to accomplish an agency function, and criminal penalties may be imposed upon the officers or employees of the agency when the violation concerns the operation of a system of records on individuals to accomplish an agency function. For purposes of the Act, when the contract is for the operation of a system of records on individuals to accomplish an agency function, the Contractor is considered to be an employee of the agency.
 - (c)(1) "Operation of a system of records," as used in this clause, means performance of any of the activities associated with maintaining the system of records, including the collection, use, and dissemination of records.

(2) "Record," as used in this clause, means any item, collection, or grouping of information about an individual that is maintained by an agency, including, but not limited to, education, financial transactions, medical history, and criminal or employment history and that contains the person's name, or the identifying number, symbol, or other identifying particular assigned to the individual, such as a fingerprint or voiceprint or a photograph.

(3) "System of records on individuals," as used in this clause, means a group of any records under the control of any agency from which information is retrieved by the name of the individual or by some identifying number, symbol, or other identifying particular assigned to the individual.

I.38 52.225-3 BUY AMERICAN ACT - SUPPLIES. (JAN 1994)

(a) The Buy American Act (41 U.S.C. 10) provides that the Government give preference to domestic end products.

"Components," as used in this clause, means those articles, materials, and supplies incorporated directly into the end products.

"Domestic end product," as used in this clause, means (1) an unmanufactured end product mined or produced in the United States, or (2) an end product manufactured in the United States, if the cost of its components mined, produced, or manufactured in the United States exceeds 50 percent of the cost of all its components. Components of foreign origin of the same class or kind as the products referred to in subparagraphs (b)(2) or (3) of this clause shall be treated as domestic. Scrap generated, collected, and prepared for processing in the United States is considered domestic.

"End products," as used in this clause, means those articles, materials, and supplies to be acquired for public use under this contract.

(b) The Contractor shall deliver only domestic end products, except those -

(1) For use outside the United States;

(2) That the Government determines are not mined, produced, or manufactured in the United States in sufficient and reasonably available commercial quantities of a satisfactory quality;

(3) For which the agency determines that domestic preference would be inconsistent with the public interest; or

(4) For which the agency determines the cost to be unreasonable (see FAR 25.105).

I.39 52.225-11 RESTRICTIONS ON CERTAIN FOREIGN PURCHASES. (AUG 1998)

(a) Unless advance written approval of the Contracting Officer is obtained, the Contractor shall not acquire, for use in the performance of this contract, any supplies or services originating from sources within, or that were located in or transported from or through, countries whose products are banned from importation into the United States by Executive order or regulations of the Office of Foreign Assets Control, Department of the Treasury. Those countries include Cuba, Iran, Iraq, Libya, North Korea, and Sudan.

(b) The Contractor shall not acquire for use in the performance of this contract any supplies or services from entities controlled by the Government of Iraq.

(c) The Contractor agrees to insert the provisions of this clause, including this paragraph (c), in all subcontracts hereunder.

I.40 52.226-1 UTILIZATION OF INDIAN ORGANIZATIONS AND INDIAN-OWNED ECONOMIC ENTERPRISES. AS PRESCRIBED IN 26.104, INSERT THE FOLLOWING CLAUSE: (SEP 1996)

- (a) For Department of Defense contracts, this clause applies only if the contract includes a subcontracting plan incorporated under the terms of the clause at FAR 52.219-9, Small, Small Disadvantaged and Women-Owned Small Business Subcontracting Plan. It does not apply to contracts awarded based on a subcontracting plan submitted and approved under paragraph (g) of the clause at 52.219-9.

- (b) Definitions. As used in this clause:

"Indian" means any person who is a member of any Indian tribe, band, group, pueblo, or community which is recognized by the Federal Government as eligible for services from the Bureau of Indian Affairs (BIA) in accordance with 25 U.S.C. 1452(c) and any "Native" as defined in the Alaska Native Claims Settlement Act (43 U.S.C. 1601).

"Indian organization" means the governing body of any Indian tribe or entity established or recognized by the governing body of an Indian tribe for the purposes of 25 U.S.C., chapter 17.

"Indian-owned economic enterprise" means any Indian-owned (as determined by the Secretary of the Interior) commercial, industrial, or business activity established or organized for the purpose of profit, provided that Indian ownership shall constitute not less than 51 percent of the enterprise.

"Indian tribe" means any Indian tribe, band, group, pueblo, or community, including native villages and native groups (including corporations organized by Kenai, Juneau, Sitka, and Kodiak) as defined in the Alaska Native Claims Settlement Act, which is recognized by the Federal Government as eligible for services from BIA in accordance with 25 U.S.C. 1452(c).

"Interested party" means a prime contractor or an actual or prospective offeror whose direct economic interest would be affected by the award of a subcontract or by the failure to award a subcontract.

- (c) The Contractor agrees to use its best efforts to give Indian organizations and Indian-owned economic enterprises (25 U.S.C. 1544) the maximum practicable opportunity to participate in the subcontracts it awards to the fullest extent consistent with efficient performance of its contract.

- (1) The Contracting Officer and the Contractor, acting in good faith, may rely on the self-certification of an Indian organization or Indian-owned economic enterprise as to its eligibility, unless an interested party challenges its status or the Contracting Officer has independent reason to question that status. In the event of a challenge to the self-certification of a subcontractor, the Contracting Officer shall refer the matter to the:

U.S. Department of the Interior
Bureau of Indian Affairs (BIA)
Attn: Chief, Division of Contracting and
Grants Administration
1849 C Street, NW, MS-334A-SIB
Washington, DC 20245

The BIA will determine the eligibility and notify the Contracting Officer. The 5 percent incentive payment will not be made within 50 working days of subcontract award or while a challenge is pending. If a subcontractor is determined to be an ineligible participant, no incentive payment will be made under the Indian Incentive Program.

- (2) The Contractor may request an adjustment under the Indian Incentive Program to the following:
- (i) The estimated cost of a cost-type contract.
 - (ii) The target cost of a cost-plus-incentive-fee prime contract.

- (iii) The target cost and ceiling price of a fixed-price incentive prime contract.
- (iv) The price of a firm-fixed-price prime contract.
- (3) The amount of the equitable adjustment to the prime contract shall be 5 percent of the estimated cost, target cost, or firm-fixed-price included in the subcontract initially awarded to the Indian organization or Indian-owned economic enterprise.
- (4) The Contractor has the burden of proving the amount claimed and must assert its request for an adjustment prior to completion of contract performance.
- (d) The Contracting Officer, subject to the terms and conditions of the contract and the availability of funds, shall authorize an incentive payment of 5 percent of the amount paid to the subcontractor. The Contracting Officer shall seek funding in accordance with agency procedures. The Contracting Officer's decision is final and not subject to the Disputes clause of this contract.

I.41 52.227-1 AUTHORIZATION AND CONSENT. (JUL 1995)

- (a) The Government authorizes and consents to all use and manufacture, in performing this contract or any subcontract at any tier, of any invention described in and covered by a United States patent (1) embodied in the structure or composition of any article the delivery of which is accepted by the Government under this contract or (2) used in machinery, tools, or methods whose use necessarily results from compliance by the Contractor or a subcontractor with (i) specifications or written provisions forming a part of this contract or (ii) specific written instructions given by the Contracting Officer directing the manner of performance. The entire liability to the Government for infringement of a patent of the United States shall be determined solely by the provisions of the indemnity clause, if any, included in this contract or any subcontract hereunder (including any lower-tier subcontract), and the Government assumes liability for all other infringement to the extent of the authorization and consent hereinabove granted.
- (b) The Contractor agrees to include, and require inclusion of, this clause, suitably modified to identify the parties, in all subcontracts at any tier for supplies or services (including construction, architect-engineer services, and materials, supplies, models, samples, and design or testing services expected to exceed the simplified acquisition threshold); however, omission of this clause from any subcontract, including those at or below the simplified acquisition threshold, does not affect this authorization and consent.

I.42 52.227-2 NOTICE AND ASSISTANCE REGARDING PATENT AND COPYRIGHT INFRINGEMENT. (AUG 996)

- (a) The Contractor shall report to the Contracting Officer, promptly and in reasonable written detail, each notice or claim of patent or copyright infringement based on the performance of this contract of which the Contractor has knowledge.
- (b) In the event of any claim or suit against the Government on account of any alleged patent or copyright infringement arising out of the performance of this contract or out of the use of any supplies furnished or work or services performed under this contract, the Contractor shall furnish to the Government, when requested by the Contracting Officer, all evidence and information in possession of the Contractor pertaining to such suit or claim. Such evidence and information shall be furnished at the expense of the Government except where the Contractor has agreed to indemnify the Government.
- (c) The Contractor agrees to include, and require inclusion of, this clause in all subcontracts at any tier for supplies or services (including construction and architect-engineer subcontracts and those for material, supplies, models, samples, or design or testing services) expected to exceed the simplified acquisition threshold at FAR 2.101.

I.43 52.227-11 PATENT RIGHTS-RETENTION BY THE CONTRACTOR (SHORT FORM)(JUN 1997)

(a) Definitions.

- (1) "Invention" means any invention or discovery which is or may be patentable or otherwise protectable under title 35 of the United States Code, or any novel variety of plant which is or may be protected under the Plant Variety Protection Act (7 U.S.C. 2321, et seq.)
- (2) "Made" when used in relation to any invention means the conception or first actual reduction to practice of such invention.
- (3) "Nonprofit organization" means a university or other institution of higher education or an organization of the type described in section 501(c)(3) of the Internal Revenue Code of 1954 (26 U.S.C. 501(c)) and exempt from taxation under section 501(a) of the Internal Revenue Code (26 U.S.C. 501(a)) or any nonprofit scientific or educational organization qualified under a state nonprofit organization statute.
- (4) "Practical application" means to manufacture, in the case of a composition of product; to practice, in the case of a process or method, or to operate, in the case of a machine or system; and, in each case, under such conditions as to establish that the invention is being utilized and that its benefits are, to the extent permitted by law or Government regulations, available to the public on reasonable terms.
- (5) "Small business firm" means a small business concern as defined at section 2 of Pub. L. 85-536 (15 U.S.C. 632) and implementing regulations of the Administrator of the Small Business Administration. For the purpose of this clause, the size standards for small business concerns involved in Government procurement and subcontracting at 13 CFR 121.3-8 and 13 CFR 121.3-12, respectively, will be used.
- (6) "Subject invention" means any invention of the contractor conceived for first actually reduced to practice in the performance of work under this contract, provided that in the case of a variety of plant, the date of determination (as defined in section 41(d) of the Plant Variety Protection Act, 7 U.S.C. 2401(d)) must also occur during the period of contract performance.

(b) Allocation of principal rights. The Contractor may retain the entire right, title, and interest throughout the world to each subject invention subject to the provisions of this clause and 35 U.S.C. 203. With respect to any subject invention in which the Contractor retains title, the Federal Government shall have a nonexclusive, nontransferable, irrevocable, paid-up license to practice or have practiced for or on behalf of the United States the subject invention throughout the world.

(c) Invention disclosure, election of title, and filing of patent application by Contractor.

- (1) The Contractor will disclose each subject invention to the Federal agency within 2 months after the inventor disclosed it in writing to Contractor personnel responsible for patent matters. The disclosure to the agency shall be in the form of a written report and shall identify the contract under which the invention was made and the inventor(s). It shall be sufficiently complete in technical detail to convey a clear understanding to the extent known at the time of the disclosure, of the nature, purpose, operation, and the physical, chemical, biological or electrical characteristics of the invention. The disclosure shall also identify any publication, on sale or public use of the invention and whether a manuscript describing the invention and whether a manuscript describing the invention has been submitted for publication and, if so, whether it has been accepted for publication at the time of disclosure. In addition, after disclosure to the agency, the Contractor will promptly notify the agency of the acceptance of any manuscript describing the invention for publication or of any on sale or public use planned by the Contractor.
- (2) The Contractor will elect in writing whether or not to retain title to any such invention by notifying the Federal agency within 2 years of disclosure to the Federal agency. However, in any case where publication, on sale or public use has initiated the 1-year statutory period

wherein valid patent protection can still be obtained in the United States, the period for election of title may be shortened by the agency to a date that is no more than 60 days prior to the end of the statutory period.

- (3) The Contractor will file its initial patent application on a subject invention to which it elects to retain title within 1 year after election of title or, if earlier, prior to the end of any statutory period wherein valid patent protection can be obtained in the United States after a publication, on sale, or public use. The Contractor will file patent applications in additional countries or international patent offices within either 10 months of the corresponding initial patent application or 6 months from the date permission is granted by the Commissioner of Patents and Trademarks to file foreign patent applications where such filing has been prohibited by a Secrecy Order.
 - (4) Requests for extension of the time for disclosure election, and filing under subparagraphs (c)(1)(2), and (3) of this clause may, at the discretion of the agency, be granted.
- (d) Conditions when the Government may obtain title. The Contractor will convey to the Federal agency, upon written request, title to any subject invention—
- (1) If the Contractor fails to disclose or elect title to the subject invention within the times specified in paragraph (c) of this clause, or elects not to retain title; provided, that the agency may only request title within 60 days after learning of the failure of the Contractor to disclose or elect within the specified times.
 - (2) In those countries in which the Contractor fails to file patent applications within the times specified in paragraph (c) of this clause; provided, however, that if the Contractor has filed a patent application in a country after the times specified in paragraph (c) of this clause, but prior to its receipt of the written request of the Federal agency, the Contractor shall continue to retain title in that country.
 - (3) In any country in which the Contractor decides not to continue the prosecution of any application for, to pay the maintenance fees on, or defend in reexamination or opposition proceeding on, a patent on a subject invention.
- (e) Minimum rights to Contractor and protection of the Contractor right to file.
- (1) The Contractor will retain a nonexclusive royalty-free license throughout the world in each subject invention to which the Government obtains title, except if the Contractor fails to disclose the invention within the times specified in paragraph (c) of this clause. The Contractor's license extends to its domestic subsidiary and affiliates, if any, within the corporate structure of which the Contractor is a party and includes the right to grant sublicenses of the same scope to the extent the Contractor was legally obligated to do so at the time the contract was awarded. The license is transferable only with the approval of the Federal agency, except when transferred to the successor of that part of the Contractor's business to which the invention pertains.
 - (2) The Contractor's domestic license may be revoked or modified by the funding Federal agency to the extent necessary to achieve expeditious practical application of subject invention pursuant to an application for an exclusive license submitted in accordance with applicable provisions at 37 CFR Part 404 and agency licensing regulations (if any). This license will not be revoked in that field of use or the geographical areas in which the Contractor has achieved practical application and continues to make the benefits of the invention reasonably accessible to the public. The license in any foreign country may be revoked or modified at the discretion of the funding Federal agency to the extent the Contractor, its licensees, or the domestic subsidiaries or affiliates have failed to achieve practical application in that foreign country.
 - (3) Before revocation or modification of the license, the funding Federal agency will furnish the Contractor a written notice of its intention to revoke or modify the license, and the Contractor will be allowed 30 days (or such other time as may be authorized by the funding Federal

agency for good cause shown by the Contractor) after the notice to show cause why the license should not be revoked or modified. The Contractor has the right to appeal, in accordance with applicable regulations in 37 CFR Part 404 and agency regulations, if any, concerning the licensing of Government-owned inventions, any decision concerning the revocation or modification of the license.

(f) Contractor action to protect the Government's interest.

- (1) The Contractor agrees to execute or to have executed and promptly deliver to the Federal agency all instruments necessary to--
 - (i) Establish or confirm the rights the Government has throughout the world in those subject inventions to which the Contractor elects to retain title; and
 - (ii) Convey title to the Federal agency when requested under paragraph (d) of this clause and to enable the Government to obtain patent protection throughout the world in that subject invention.
- (2) The Contractor agrees to require, by written agreement, its employees, other than clerical and nontechnical employees, to disclose promptly in writing to personnel identified as responsible for the administration of patent matters and in a format suggested by the Contractor each subject invention made under contract in order that the Contractor can comply with the disclosure provisions of paragraph (c) of this clause, and to execute all papers necessary to file patent applications on subject inventions and to establish the Government's rights in the subject inventions. This disclosure format should require, as a minimum, the information required by subparagraph (c)(1) of this clause. The Contractor shall instruct such employees, through employee agreements or other suitable educational programs, on the importance of reporting inventions in sufficient time to permit the filing of patent applications prior to U.S. or foreign statutory bars.
- (3) The Contractor will notify the Federal agency of any decisions not to continue the prosecution of a patent application, pay maintenance fees, or defend in a reexamination or opposition proceeding on a patent, in any country, not less than 30 days before the expiration of the response period required by the relevant patent office.
- (4) The Contractor agrees to include, within the specification of any United States patent application and any patent issuing thereon covering a subject invention was made with Government support under (identify the contract) awarded by (identify the Federal agency). The Government has certain rights in the invention."

(g) Subcontracts.

- (1) The Contractor will include this clause, suitably modified to identify the parties, in all subcontracts, regardless of tier, for experimental, developmental, or research work to be performed by a small business firm or domestic nonprofit organization. The subcontractor will retain all rights provided for the Contractor in this clause, and the Contractor will not, as part of the consideration for awarding the subcontract, obtain rights in the subcontractor's subject inventions.
- (2) The Contractor will include all other subcontracts, regardless of tier, for experimental, developmental, or research work the patent rights clause required by Subpart 27.3.
- (3) In the case of subcontracts, at any tier, the agency, subcontractor, and the Contractor agree that the mutual obligations of the parties created by this clause constitute a contract between the subcontractor and the Federal agency with respect to the matters covered by the clause; provided, however, that nothing in this paragraph is intended to confer any jurisdiction under the Contract Disputes Act in connection with proceedings under paragraph (j) of this clause.

- (h) Reporting on utilization of subject inventions. The Contractor agrees to submit, on request, periodic reports no more frequently than annually on the utilization of a subject invention or on efforts at obtaining such utilization that are being made by the Contractor or its licensees or assignees. Such reports shall include information regarding the status of development, date of first commercial sale or use, gross royalties received by the Contractor, and such other data and information as the agency may reasonably specify. The Contractor also agrees to provide additional reports as may be requested by the agency in connection with any march-in proceeding undertaken by the agency in accordance with paragraph (j) of this clause. As required by 35 U.S.C. 202(c)(5), the agency agrees it will not disclose such information to persons outside the Government without permission of the Contractor.
- (i) Preference for United States industry. Notwithstanding any other provision of this clause, the Contractor agrees that neither it nor any assignee will grant to any person the exclusive right to use or sell any subject invention in the United States unless such person agrees that any product embodying the subject invention or produced through the use of the subject invention will be manufactured substantially in the United States. However, in individual cases, the requirement for such an agreement may be waived by the Federal agency upon a showing by the Contractor or its assignee that reasonable but unsuccessful efforts have been made to grant license on similar terms to potential licensees that would be likely to manufacture is not commercially feasible.
- (j) March-in rights. The Contractor agrees that, with respect to any subject invention in which it has acquired title, the Federal agency has the right in accordance with the procedures in 37 CFR 401.6 and any supplemental regulations of the agency to require the Contractor, an assignee or exclusive licensee of subject invention to grant a nonexclusive, partially exclusive, or exclusive license in any field of use to a responsible applicant or applicants, upon terms that are reasonable under the circumstance, and if the Contractor, assignee, or exclusive licensee refuses such a request the federal agency has the right to grant such a license in itself if the Federal agency determines that—
- (1) Such action is necessary because the Contractor or assignee has not taken, or is not expected to take within a reasonable time, effective steps to achieve practical application of the subject invention in such field of use;
 - (2) Such action is necessary to alleviate health or safety needs which are not reasonably satisfied by the Contractor, assignee, or their licensees;
 - (3) Such action is necessary to alleviate health or safety needs which are not reasonably satisfied by the Contractor, assignee, or their licensees;
 - (4) Such action is necessary to meet requirements for public use specified by Federal regulations and such requirements are not reasonably satisfied by the Contractor, assignee, or licensees; or
- (k) Special provisions for contracts within nonprofit organizations. If the Contractor is a nonprofit organization, it agrees that—
- (1) Rights to a subject invention in the United States may not be assigned without the approval of the Federal agency, except where such assignment is made to an organization which has as one of its primary functions the management of inventions; provided, that such assignee will be subject to the same provisions as the Contractor;
 - (2) The Contractor will share royalties collected on a subject invention with the inventor, including Federal employee co-inventors (when the agency deems it appropriate) when the subject invention is assigned in accordance with 35 U.S.C. 202(e) and 37 CFR 401.10;
 - (3) The balance of any royalties or income earned by the Contractor with respect to subject inventions, after payment of expenses (including payments to inventors) incidental to the administration of subject inventions will be utilized for the support of scientific research or education; and

- (4) It will make efforts that are reasonable under the circumstances to attract licensees of subject inventions that are small business firms, and that it will give a preference to a small business firm when licensing a subject invention if the Contractor determines that the small business firm has a plan or proposal for marketing the invention which, if executed, is equally as likely to bring the invention to practical application as any plans or proposals from applicants that are not small business firms; provided, that the Contractor is also satisfied that the small business firm has the capability and resources to carry out its plan or proposal. The decision whether to give a preference in any specific case will be at the discretion of the contractor. However, the Contractor agrees that the Secretary of Commerce may review the Contractor's licensing program and decisions regarding small business applicants, and the Contractor will negotiate changes to its licensing policies, procedures, or practices with the Secretary of Commerce when the Secretary's review discloses that the Contractor could take reasonable steps to more effectively implement the requirements of this subparagraph (k)(4).

(l) Communications. (Complete according to agency instructions).

I.44 52.227-6 ROYALTY INFORMATION. (APR 1984)

- (a) Cost or charges for royalties. When the response to this solicitation contains costs or charges for royalties totaling more than \$250, the following information shall be included in the response relating to each separate item of royalty or license fee:

- (1) Name and address of licensor.
- (2) Date of license agreement.
- (3) Patent numbers, patent application serial numbers, or other basis on which the royalty is payable.
- (4) Brief description, including any part or model numbers of each contract item or component on which the royalty is payable.
- (5) Percentage or dollar rate of royalty per unit.
- (6) Unit price of contract item.
- (7) Number of units.
- (8) Total dollar amount of royalties.

- (b) Copies of current licenses. In addition, if specifically requested by the Contracting Officer before execution of the contract, the offeror shall furnish a copy of the current license agreement and an identification of applicable claims of specific patents.

I.45 952.227-13 PATENT RIGHTS - ACQUISITION BY THE GOVERNMENT. (SEP 1997) (DEVIATION)

- (a) Definitions.

"Invention," as used in this clause, means any invention or discovery which is or may be patentable or otherwise protectable under title 35 of the United States Code or any novel variety of plant that is or may be protectable under the Plant Variety Protection Act (7 U.S.C. 2321, *et seq.*)

"Practical application," as used in this clause, means to manufacture, in the case of a composition or product; to practice, in the case of a process or method; or to operate, in the case of a machine or system; and, in each case, under such conditions as to establish that the invention is being utilized and that its benefits are, to the extent permitted by law or Government regulations, available to the public on reasonable terms.

"Subject invention," as used in this clause, means any invention of the Contractor conceived or first actually reduced to practice in the course of or under this contract.

"Patent Counsel," as used in this clause, means the Department of Energy Patent Counsel assisting the procuring activity.

"DOE patent waiver regulations," as used in this clause, means the Department of Energy patent licensing regulations. See 10 CFR part 784.

(b) Allocations of principal rights.

(1) *Assignment to the Government.* The Contractor agrees to assign to the Government the entire right, title, and interest throughout the world in and to each subject invention, except to the extent that rights are retained by the Contractor under subparagraph (b)(2) and paragraph (d) of this clause.

(2) *Greater rights determinations.*

(i) The Contractor, or an employee-inventor after consultation with the Contractor, may request greater rights than the nonexclusive license and the foreign patent rights provided in paragraph (d) of this clause on identified inventions in accordance with the DOE patent waiver regulations. A request for a determination of whether the Contractor or the employee-inventor is entitled to acquire such greater rights must be submitted to the Patent Counsel with a copy to the Contracting Officer at the time of the first disclosure of the invention pursuant to subparagraph (e)(2) of this clause, or not later than 8 months thereafter, unless a longer period is authorized in writing by the Contracting Officer for good cause shown in writing by the Contractor. Each determination of greater rights under this contract shall be subject to paragraph (c) of this clause, unless otherwise provided in the greater rights determination, and to the reservations and conditions deemed to be appropriate by the Secretary of Energy or designee.

(ii) Within two (2) months after the filing of a patent application, the Contractor shall provide the filing date, serial number and title, a copy of the patent application (including an English-language version if filed in a language other than English), and, promptly upon issuance of a patent, provide the patent number and issue date for any subject invention in any country for which the Contractor has been granted title or the right to file and prosecute on behalf of the United States by the Department of Energy.

(iii) Not less than thirty (30) days before the expiration of the response period for any action required by the Patent and Trademark Office, notify the Patent Counsel of any decision not to continue prosecution of the application.

(iv) Upon request, the Contractor shall furnish the Government an irrevocable power to inspect and make copies of the patent application file.

(c) Minimum rights acquired by the Government.

(1) With respect to each subject invention to which the Department of Energy grants the Contractor principal or exclusive rights, the Contractor agrees as follows:

(i) The Contractor hereby grants to the Government a nonexclusive, transferable, irrevocable, paid-up license to practice or have practiced each subject invention throughout the world by or on behalf of the Government of the United States (including any Government agency).

(ii) The Contractor agrees that with respect to any subject invention in which DOE has granted it title, DOE has the right in accordance with the procedures in the DOE patent waiver regulations (10 CFR part 784) to require the Contractor, an assignee, or exclusive licensee of a subject invention to grant such a license itself if it determines that

- (A) Such action is necessary because the Contractor or assignee has not taken, or is not expected to take within a reasonable time, effective steps to achieve practical application of the subject invention in such field of use;
 - (B) Such action is necessary to alleviate health or safety needs which are not reasonably satisfied by the Contractor, assignee, or their licensees;
 - (C) Such action is necessary to meet requirements for public use specified by Federal regulations and such requirements are not reasonably satisfied by the Contractor assignee, or licensees; or
 - (D) Such action is necessary because the agreement required by paragraph (i) of this clause has neither been obtained nor waived or because a licensee of the exclusive right to use or sell any subject invention in their United States is in breach of such agreement.
- (iii) The Contractor agrees to submit on request periodic reports no more frequently than annually on the utilization of a subject invention or on efforts at obtaining such utilization that are being made by the Contractor or its licensees or assignees. Such reports shall include information regarding the status of development, date of first commercial sale or use, gross royalties received by the Contractor, and such other data and information as DOE may reasonably specify. The Contractor also agrees to provide additional reports as may be requested by DOE in connection with any march-in proceedings undertaken by that agency in accordance with subparagraph (c)(1)(ii) of this clause. To the extent data or information supplied under this section is considered by the Contractor, its licensee, or assignee to be privileged and confidential and is so marked, the Department of Energy agrees that, to the extent permitted by law, it will not disclose such information to persons outside the Government.
- (iv) The Contractor agrees, when licensing a subject invention, to arrange to avoid royalty charges on acquisitions involving Government funds, including funds derived through a Military Assistance Program of the Government or otherwise derived through the Government, to refund any amounts received as royalty charges on a subject invention in acquisitions for, or on behalf of, refund in any instrument transferring rights in the invention to any party.
- (v) The Contractor agrees to provide for the Government paid-up license pursuant to subparagraph (c)(1)(i) of this clause in any instrument transferring rights in a subject invention and to provide for the granting of licenses as required by subparagraph (c)(1)(iii) of this clause, whenever the instrument transfers principal or exclusive rights in a subject invention.
- (2) Nothing contained in the paragraph (c) shall be deemed to grant to the Government any rights with respect to any invention other than a subject invention.
- (d) Minimum rights to the Contractor.
- (1) The Contractor may request the right to reserve a revocable, nonexclusive, royalty-free license throughout the world in each subject invention to which the Government obtains title, except if the Contractor fails to disclose the invention within the times specified in paragraph (e)(2) of this clause. When DOE approves such reservation, the contractor's license will extend to its domestic subsidiaries and affiliates, if any, within the corporate structure of which the Contractor is a party and includes the right to grant sublicenses of the same scope to the extent the Contractor was legally obligated to do so at the time the contract was awarded. The license is transferable only with the approval of DOE, except when transferred to the successor of that part of the Contractor's business to which the invention pertains.

- (2) The Contractor's domestic license may be revoked or modified by DOE to the extent necessary to achieve expeditious practical application of the subject invention pursuant to an application for an exclusive license submitted in accordance with applicable provisions in 37 CFR part 404 and agency licensing regulations. This license will not be revoked in that field of use or the geographical areas in which the Contractor has achieved practical applications and continues to make the benefits to the invention reasonably accessible to the public. The license in any foreign country may be revoked or modified at the discretion of DOE to the extent the Contractor, its licensees, or its domestic subsidiaries or affiliates have failed to achieve practical application in that foreign country.
- (3) Before revocation or modification of the license, DOE will furnish the Contractor a written notice of its intention to revoke or modify license, and the Contractor will be allowed 30 days (or such other time as may be authorized by DOE for good cause shown by the Contractor) after the notice to show cause why the license should not be licensing should not be revoked or modified. The Contractor has the right appeal in accordance with applicable agency licensing regulations and 37 CFR part 404 concerning the licensing of Government-owned inventions, any decision concerning the revocation or modification of its license.
- (4) The Contractor may request the right to acquire patent rights to a subject invention in any foreign country where the Government has elected not to secure such rights, subject to the conditions in subparagraphs (d)(4)(i) through (d)(4)(vii) of this clause. Such request must be made in writing to the Patent Counsel as part of the disclosure required by subparagraph (e)(2) of this clause, with a copy to the DOE Contracting Officer DOE approval, if given, will be based on a determination that this would best serve the national interest.
- (i) The recipient of such rights, when specifically requested by DOE, and three years after issuance of a foreign patent disclosing the subject invention, shall furnish DOE a report stating:
- (A) The Commercial use that is being made, or is intended to be made, of said invention, and
- (B) The steps taken to bring the invention to the point of practical application or to make the invention available for licensing.
- (ii) The Government shall retain at least an irrevocable, nonexclusive, paid-up license to make, use, and sell the invention throughout the world by or on behalf of the Government (including any Government agency) and States and domestic municipal governments, unless the Secretary of Energy or designee determines that it would not be in the public interest to acquire the license for the States and domestic municipal governments.
- (iii) If noted elsewhere in this contract as a condition of the grant of an advance waiver of the Government's title to inventions under this contract, or, if no advance waiver was granted by a waiver of the Government's title to an identified invention is granted pursuant to subparagraph (b)(2) of this clause upon a determination by the Secretary of Energy that it is in the Government's best interest, this license shall include the right of the Government to sublicense foreign governments pursuant to any existing or future treaty or agreement with such foreign governments.
- (iv) Subject to the rights granted in subparagraphs (d)(1), (2), and (3) of this clause, the Secretary of Energy or designee shall have the right to terminate the foreign patent rights granted in this subparagraph (d)(4) in whole or in part unless the recipient of such rights demonstrates to the satisfaction of the Secretary of Energy or designee that effective steps necessary to accomplish substantial utilization of the invention have been taken or within a reasonable time will be taken.

- (v) Subject to the right granted in subparagraphs (d)(1), (2), and (3) of this clause, the Secretary of Energy or designee shall have the right, commencing four years after foreign patent rights are accorded under this subparagraph (d)(4), to require the granting of a nonexclusive or partially exclusive license to a responsible applicant or applicants, upon terms reasonable under the circumstances to terminate said foreign patent rights in whole or in part, following a hearing upon notice thereof to the public upon a petition by an interested person justifying such hearing:
 - (A) If the Secretary of Energy or designee determines, upon review of such material as he deems relevant, and after the recipient of such rights or other interested person has had the opportunity to provide such relevant and material information as the Secretary or designee may require, that such foreign patent rights have tended substantially to lessen competition or to result in undue market concentration in any section of the United States in any line of commerce to which the technology relates; or
 - (B) Unless the recipient of such rights demonstrates to the satisfaction of the Secretary of Energy or designee at such hearing that the recipient has taken effective steps, or within a reasonable time thereafter is expected to take such steps, necessary to accomplish substantial utilization of the invention.
 - (vi) If the contractor is to file a foreign patent application on a subject invention, the Government agrees, upon written request, to use its best efforts to withhold publication of such invention disclosures for such period of time specified by Patent Counsel, but in no event shall the Government or its employees be liable for any publication thereof.
 - (vii) Subject to the license specified in subparagraphs (d)(1), (2), and (3) of this clause, the contractor or inventor agrees to convey to the Government, upon request, the entire right, title, and interest in any foreign country in which the contractor or inventor fails to have a patent application filed in a timely manner or decides not to continue prosecution or to pay any maintenance fees covering the invention. To avoid forfeiture of the patent application or patent, the contractor or inventor shall, not less than 60 days before the expiration period for any action required by any patent office, notify the Patent Counsel of such failure or decision, and deliver to the Patent Counsel the executed instruments necessary for the conveyance specified in this paragraph.
- (e) Invention identification, disclosures, and reports.
- (1) The Contractor shall establish and maintain active and effective procedures to assure that subject inventions are promptly identified and disclosed to Contractor personnel responsible for patent matters within 6 months of conception and/or first actual reduction to practice, whichever occurs first in the performance of work under this contract. These procedures shall include the maintenance of laboratory notebooks or equivalent records and other records as are reasonably necessary to document the conception and/or the first actual reduction to practice of subject inventions, and records that show that the procedures for identifying and disclosing the inventions are followed. Upon request, the Contractor shall furnish the Contracting Officer a description of such procedures for evaluation and for determination as to their effectiveness.
 - (2) The Contractor shall disclose each subject invention to the DOE Patent Counsel with a copy to the Contracting Officer within 2 months after the inventor discloses it in writing to Contractor personnel responsible for patent matters or, if earlier, within 6 months after the Contractor personnel responsible for patent matters or, if earlier, within 6 months after the Contractor becomes aware that a subject invention has been made, but in any event before any on sale, public use, or publication, of such invention known to the Contractor. The disclosure to DOE shall be in the form of written report and shall identify the contract under which the invention was made and the inventor(s). It shall be sufficiently complete in technical detail to convey a clear understanding, to the extent known at the time of the disclosure, of the nature, purpose,

operation, and physical, chemical, biological, or electrical characteristics of the invention. The disclosure shall also identify any publication or of any on sale or public use planned by the Contractor. The report should also include any request for a greater rights determination in accordance with subparagraph (b)(2) of this clause. When an invention is disclosed to DOE under this paragraph, it shall be deemed to have been made in the manner specified in Section (a)(1) and (a)(2) of 42 U.S.C. 5908, unless the Contractor contends in writing at the time the invention is disclosed that it was not so made.

- (3) The Contractor shall furnish the Contracting Officer the following:
 - (i) Interim reports every 12 months (or such longer period as may be specified by the Contracting Officer) from the date of the contract, listing all subject inventions during that period, and including a statement that all subject inventions have been disclosed (or that there are not such inventions), and that such disclosure has been made in accordance with the procedures required by paragraph (e)(1) of this clause.
 - (ii) A final report, within 3 months after completion of the contracted work listing all subject inventions or containing a statement that there were no such inventions, and listing all subcontracts at any tier containing a patent rights clause or containing a statement that there were no such subcontracts.
- (4) The Contractor agrees to require by written agreement, its employees, other than clerical and nontechnical employees, to disclose promptly in writing to personnel identified as responsible for the administration of patent matters and in a format suggested by the Contractor each subject invention made under contract in order that the Contractor can comply with the disclosure provisions of paragraph (c) of this clause, and to execute all papers necessary to file applications on subject inventions. This disclosure format should require, as a minimum, the information required by subparagraph (e)(2) of this clause.
- (5) The Contractor agrees, subject to FAR 27.302(j), that the Government may duplicate and disclose subject inventions disclosures and all other reports and papers furnished or required to be furnished pursuant to this clause.
- (f) Examination of records relating to inventions.
 - (1) The Contracting Officer or any authorized representative shall, until 3 years after final payment under this contract, have the right to examine any books (including laboratory notebooks), records, and documents of the Contractor relating to the conception or first actual reduction to practice of inventions in the same field of technology as the work under this contract to determine whether
 - (i) Any such inventions are subject inventions;
 - (ii) The Contractor has established and maintains the procedures required by subparagraphs (e)(1) and (4) of this clause; complied with the procedures.
 - (iii) The Contractor and its inventors have complied with the procedures.
 - (2) If the Contracting Officer learns of an unreported Contractor invention which the Contracting Officer believes may be a subject invention, the Contractor may be required to disclose the invention to DOE for a determination of ownership rights.
 - (3) Any examination of records under this paragraph will be subject to appropriate conditions to protect the confidentiality of the information involved.
- (g) Withholding of payment. (This paragraph does not apply to subcontracts).

- (1) Any time before final payment under this contract, the Contracting Officer may, in the Government's interest, withhold payment until reserve not exceeding \$50,000 or 5 percent of the amount of this contract, whichever is less, shall have been set aside if, in the Contracting Officer's opinion, the Contractor fails to
 - (i) Convey to the Government, using a DOE-approved form, the title and/or rights of the Government in each subject invention as required by this clause.
 - (ii) Establish, maintain, and follow effective procedures for identifying and disclosing subject inventions pursuant to subparagraph (e)(1) of this clause;
 - (iii) Disclose any subject invention pursuant to subparagraph (e)(2) of this clause;
 - (iv) Deliver acceptable interim reports pursuant to subparagraph (e)(3)(i) of this clause; or
 - (v) Provide the information regarding subcontracts pursuant to subparagraph (h)(4) of this clause.
 - (2) Such reserve or balance shall be withheld until the Contracting Officer has determined that the Contractor has rectified whatever deficiencies exist and has delivered all reports, disclosures, and other information required by this clause.
 - (3) Final payment under this contract shall not be made before the Contractor delivers to the Contracting Officer all disclosures of subject inventions required by subparagraph (e)(2) of this clause, and acceptable final report pursuant to subparagraph (e)(3)(ii) of this clause, and the Patent Counsel has issued a patent clearance certification to the Contracting Officer.
 - (4) The Contracting Officer may decrease or increase the sums withheld up to the maximum authorized above. No amount shall be withheld under this paragraph while the amount specified by this paragraph is being withheld under other provisions of the contract. The withholding of any amount or the subsequent payment thereof shall not be construed as a waiver of any Government rights.
- (h) Subcontracts.
- (1) The contractor shall include the clause at 48 CFR 952.227-11 (suitably modified to identify the parties) in all subcontracts, regardless of tier, for experimental, developmental, demonstration, or research work to be performed by a small business firm or domestic nonprofit organization, except where the work of the subcontract is subject to an Exceptional Circumstances Determination by DOE. In all other subcontracts, regardless of tier, for experimental, developmental, demonstration, or research work, the contractor shall include this clause (suitably modified to identify the parties). The contractor shall not, as part of the consideration for awarding the subcontract, obtain rights in the subcontractor's subject inventions.
 - (2) In the event of a refusal by a prospective subcontractor to accept such a clause the Contractor
 - (i) Shall promptly submit a written notice to the Contracting Officer setting forth the subcontractor's reasons for such refusal and other pertinent information that may expedite disposition of the matter; and
 - (ii) Shall not proceed with such subcontract without the written authorization of the Contracting Officer.
 - (3) In the case of subcontracts at any tier, DOE, the subcontractor, and Contractor agree that the mutual obligations of the parties created by this clause constitute a contract between the subcontractor and DOE with respect to those matters covered by this clause.

- (4) The Contractor shall promptly notify the Contracting Officer in writing upon the award of any subcontract at any tier containing a patent rights clause by identifying the subcontractor, the applicable patent rights clause, the work to be performed under the subcontract, and the dates of award and estimated completion. Upon request of the Contracting Officer, the Contractor shall furnish a copy of such subcontract, and no more frequently than annually, a listing of the subcontracts that have been awarded.
 - (5) The contractor shall identify all subject inventions of the subcontractor of which it acquires knowledge in the performance of this contract and shall notify the Patent Counsel, with a copy to the contracting officer, promptly upon identification of the inventions.
- (i) Preference United States industry. Unless provided otherwise, no Contractor that receives title to any subject invention and no assignee of any such Contractor shall grant to any person the exclusive right to use or sell any subject invention in the United States unless such person agrees that any products embodying the subject invention will be manufactured substantially in the United States. However, in individual cases, the requirement may be waived by the Government upon a showing by the Contractor or assignee that reasonable but unsuccessful efforts have been made to grant licenses on similar terms to potential licensees that would be likely to manufacture substantially in the United States or that under the circumstances domestic manufacture is not commercially feasible.
- (j) Atomic energy.
- (1) No claim for pecuniary award of compensation under the provisions of the Atomic Energy Act of 1954, as amended, shall be asserted with respect to any invention or discovery made or conceived in the course of or under this contract.
 - (2) Except as otherwise authorized in writing by the Contracting Officer, the Contractor will obtain patent agreements to effectuate the provisions of subparagraph (e)(1) of this clause from all persons who perform any part of the work under this contract, except nontechnical personnel, such as clerical employees and manual laborers.
- (k) Background Patents.
- (1) "Background Patent" means a domestic patent covering an invention or discovery which is not a subject invention and which is owned or controlled by the Contractor at any time through the completion of this contract:
 - (i) Which the contractor, but not the Government, has the right to license to others without obligation to pay royalties thereon, and
 - (ii) Infringement of which cannot reasonably be avoided upon the practice of any specific process, method, machine, manufacture, or composition of matter (including relatively minor modifications thereof) which is a subject of the research, development, or demonstration work performed under this contract.
 - (2) The Contractor agrees to and does hereby grant to the Government a royalty-free, nonexclusive license under any background patent for purpose of practicing a subject of this contract by or for the Government in research, development, and demonstration work only.
 - (3) The Contractor also agrees that upon written application by DOE, it will grant to responsible parties, for purpose of practicing a subject of this contract, nonexclusive licenses under any background patent on terms that are reasonable under the circumstances. If however, the Contractor believes that exclusive rights are necessary to achieve expeditious commercial development or utilization, then a request may be made to DOE for DOE approval of such licensing by the Contractor.
 - (4) Notwithstanding subparagraph (k)(3) of this clause, the contractor shall not be obligated to license any background patent if the Contractor demonstrates to the satisfaction of the Secretary of Energy or designee that:

- (i) A competitive alternative to the subject matter covered by said background patent is commercially available or readily introducible from one or more other sources; or
 - (ii) The Contractor or its licensees are supplying the subject matter covered by said background patent in sufficient quantity and at reasonable prices to satisfy market needs, or have taken effective steps or within a reasonable time are expected to take effective steps to so supply the subject matter.
- (l) Publication. It is recognized that during the course of the work under this contract, the Contractor or its employees may from time to time desire to release or publish information regarding scientific or technical developments conceived or first actually reduced to practice in the course of or under this contract. In order that public disclosure of such information will not adversely affect the patent interests of DOE or the Contractor, patent approval for release of publication shall be secured from Patent Counsel prior to any such release or publication.
- (m) Forfeiture of rights in unreported subject inventions.
 - (1) The Contractor shall forfeit and assign to the Government, at the request of the Secretary of Energy or designee, all rights in any subject invention which the Contractor fails to report to Patent Counsel within six months after the time the Contractor:
 - (i) Files or causes to be filed a United States or foreign patent application thereon; or
 - (ii) Submits the final report required by subparagraph (e)(2)(ii) of this clause, whichever is later.
 - (2) However, the Contractor shall not forfeit rights in a subject invention if, within the time specified in subparagraph (m)(1) of this clause, the Contractor:
 - (i) Prepares a written decision based upon a review of the record that the invention was neither conceived nor first actually reduced to practice in the course of or under the contract and delivers the decision to Patent Counsel, with a copy to the Contracting Officer; or
 - (ii) Contending that the invention is not a subject invention, the Contractor nevertheless discloses the invention and all facts pertinent to this contention to the facts pertinent to this contention to the Patent Counsel, with a copy to the Contracting Officer; or
 - (iii) Establishes that the failure to disclose did not result from the Contractor's fault or negligence.
 - (3) Pending written assignment of the patent application and patents on a subject invention determined by the Secretary of Energy or designee to be forfeited (such determination to be final decision under the Disputes clause of this contract), the Contractor shall be deemed to hold the invention and the patent applications and patents pertaining thereto in trust for the Government. The forfeiture provision of this paragraph (m) shall be in addition to and shall not supersede other rights and remedies which the Government may have with respect to subject inventions.

I.46 52.227-16 ADDITIONAL DATA REQUIREMENTS (JUN 1987)

- (a) In addition to the data (as defined in the clause at 52.227-17, Rights in Data—Special Works, the Contracting Officer may, at any time during contract performance or within a period of 3 years after acceptance of all items to be delivered under this contract, order any data first produced or specifically used in the performance of this contract.
- (b) The Rights in Data —General clause or other equivalent included in this contract is applicable to all data ordered under this Additional Data Requirements clause. Nothing contained in this clause shall require the Contractor to deliver any data the withholding of which is authorized by the Rights in Data—

General or other equivalent clause of this contract, or data which are specifically identified in this contract as not subject to this clause.

- (c) When data are to be delivered under this clause, the Contractor will be compensated for converting the data into the prescribed form, for reproduction, and for delivery.
- (d) The Contracting Officer may release the Contractor from the requirements of this clause for specifically identified data items at any time during the 3-year period set forth in paragraph (a) of this clause.

I.47 52.227-17 RIGHTS IN DATA - SPECIAL WORKS. (JUN 1987)

- (a) Definitions.

"Data," as used in this clause, means recorded information regardless of form or the medium on which it may be recorded. The term includes technical data and computer software. The term does not include information incidental to contract administration, such as financial, administrative, cost or pricing or management information.

"Unlimited rights," as used in this clause, means the right of the Government to use, disclose, reproduce, prepare derivative works, distribute copies to the public, and perform publicly and display publicly, in any manner and for any purpose whatsoever, and to have or permit others to do so.

- (b) Allocation of Rights.

- (1) The Government shall have -

- (i) Unlimited rights in all data delivered under this contract, and in all data first produced in the performance of this contract, except as provided in paragraph (c) of this clause for copyright.
 - (ii) The right to limit exercise of claim to copyright in data first produced in the performance of this contract, and to obtain assignment of copyright in such data, in accordance with subparagraph (c)(1) of this clause.
 - (iii) The right to limit the release and use of certain data in accordance with paragraph (d) of this clause.

- (2) The Contractor shall have, to the extent permission is granted in accordance with subparagraph (c)(1) of this clause, the right to establish claim to copyright subsisting in data first produced in the performance of this contract.

- (c) Copyright -

- (1) Data first produced in the performance of this contract.

- (i) The Contractor agrees not to assert, establish, or authorize others to assert or establish, any claim to copyright subsisting in any data first produced in the performance of this contract without prior written permission of the Contracting Officer. When claim to copyright is made, the Contractor shall affix the appropriate copyright notice of 17 U.S.C. 401 or 402 and acknowledgment of Government sponsorship (including contract number) to such data when delivered to the Government, as well as when the data are published or deposited for registration as a published work in the U.S. Copyright Office. The Contractor grants to the Government, and others acting on its behalf, a paid-up nonexclusive, irrevocable, worldwide license for all such data to reproduce, prepare derivative works, distribute copies to the public, and perform publicly and display publicly, by or on behalf of the Government.
 - (ii) If the Government desires to obtain copyright in data first produced in the performance of this contract and permission has not been granted as set forth in

subdivision (c)(1)(i) of this clause, the Contracting Officer may direct the Contractor to establish, or authorize the establishment of, claim to copyright in such data and to assign, or obtain the assignment of, such copyright to the Government or its designated assignee.

- (2) Data not first produced in the performance of this contract. The Contractor shall not, without prior written permission of the Contracting Officer, incorporate in data delivered under this contract any data not first produced in the performance of this contract and which contain the copyright notice of 17 U.S.C. 401 or 402, unless the Contractor identifies such data and grants to the Government, or acquires on its behalf, a license of the same scope as set forth in subparagraph (c)(1) of this clause.
- (d) Release and use restrictions. Except as otherwise specifically provided for in this contract, the Contractor shall not use for purposes other than the performance of this contract, nor shall the Contractor release, reproduce, distribute, or publish any data first produced in the performance of this contract, nor authorize others to do so, without written permission of the Contracting Officer.
- (e) Indemnity. The Contractor shall indemnify the Government and its officers, agents, and employees acting for the Government against any liability, including costs and expenses, incurred as the result of the violation of trade secrets, copyrights, or right of privacy or publicity, arising out of the creation, delivery, publication, or use of any data furnished under this contract; or any libelous or other unlawful matter contained in such data. The provisions of this paragraph do not apply unless the Government provides notice to the Contractor as soon as practicable of any claim or suit, affords the Contractor an opportunity under applicable laws, rules, or regulations to participate in the defense thereof, and obtains the Contractor's consent to the settlement of any suit or claim other than as required by final decree of a court of competent jurisdiction; nor do these provisions apply to material furnished to the Contractor by the Government and incorporated in data to which this clause applies.

L.48 52.227-19 COMMERCIAL COMPUTER SOFTWARE--RESTRICTED RIGHTS (JUN 1987)

- (a) As used in this clause, "restricted computer software" means any computer program, computer data base, or documentation thereof, that has been developed at private expense and either is a trade secret, is commercial or financial and confidential or privileged, or is published and copyrighted.
- (b) Notwithstanding any provisions to the contrary contained in any Contractor's standard commercial license or lease agreement pertaining to any restricted computer software delivered under this purchase order/contract, and irrespective of whether any such agreement has been proposed prior to or after issuance of this purchase order contract or of the fact that such agreement may be affixed to or accompany the restricted computer software upon delivery, vendor agrees that the Government shall have the rights that are set forth in paragraph (c) of this clause to use, duplicate or disclose any restricted computer software delivered under this purchase order/contract. The terms and provisions of this contract, including any commercial lease agreement, shall be subject to paragraph (c) of this clause and shall comply with Federal laws and the Federal Acquisition Regulation.
- (c)(1) The restricted computer software delivered under this contract may not be used, reproduced or disclosed by the Government except as provided in subparagraph (c)(2) of this clause or as expressly stated otherwise in this contract.
- (2) The restricted computer software may be--
 - (i) Used or copied for use in or with the computer or computers for which it was acquired, including use at any Government installation to which such computer or computers may be transferred;
 - (ii) Used or copied for use in or with backup computer if any computer for which it was acquired is inoperative;
 - (iii) Reproduced for safekeeping (archives) or backup purposes;

- (iv) Modified, adapted, or combined with other computer software, provided that the modified, combined, or adapted portions of the derivative software incorporating any of the delivered, restricted computer software shall be subject to same restrictions set forth in this purchase order/contract.
- (v) Disclosed to and reproduced for use by support service Contractors or their subcontractors, subject to the same restrictions set forth in this purchase order/contract; and
- (vi) Used or copied for use in or transferred to a replacement computer.
- (3) If the restricted computer software delivered under this purchase order/contract is published and copyrighted, it is licensed to the Government, without disclosure prohibitions, with the rights set forth in subparagraph (c)(2) of this clause unless expressly stated otherwise in this purchase order/contract.
- (4) To the extent feasible the Contractor shall affix a Notice substantially as follows to any restricted computer software delivered under this purchase order/contract; or, if the vendor does not, the Government has the right to do so:

Notice--Notwithstanding any other lease or license agreement that may pertain to, or accompany the delivery of, this computer software, the rights of the Government regarding its use, reproduction and disclosure are as set forth in Government Contract No. _____.

- (d) If any restricted computer software is delivered under this contract with the copyright notice of 17 U.S.C. 401, it will be presumed to be published and copyrighted and licensed to the Government in accordance with subparagraph (c)(3) of this clause, unless a statement substantially as follows accompanies such copyright notice:

Unpublished--rights reserved under the copyright laws of the United States.

I.49 52.228-5 INSURANCE - WORK ON A GOVERNMENT INSTALLATION. (JAN 1997)

- (a) The Contractor shall, at its own expense, provide and maintain during the entire performance of this contract, at least the kinds and minimum amounts of insurance required in the Schedule or elsewhere in the contract.
- (b) Before commencing work under this contract, the Contractor shall notify the Contracting Officer in writing that the required insurance has been obtained. The policies evidencing required insurance shall contain an endorsement to the effect that any cancellation or any material change adversely affecting the Government's interest shall not be effective -
 - (1) For such period as the laws of the State in which this contract is to be performed prescribe; or
 - (2) Until 30 days after the insurer or the Contractor gives written notice to the Contracting Officer, whichever period is longer.
- (c) The Contractor shall insert the substance of this clause, including this paragraph (c), in subcontracts under this contract that require work on a Government installation and shall require subcontractors to provide and maintain the insurance required in the Schedule or elsewhere in the contract. The Contractor shall maintain a copy of all subcontractors' proofs of required insurance, and shall make copies available to the Contracting Officer upon request.

I.50 52.229-3 FEDERAL, STATE, AND LOCAL TAXES. (JAN 1991)

- (a) "Contract date," as used in this clause, means the date set for bid opening or, if this is a negotiated contract or a modification, the effective date of this contract or modification.

"All applicable Federal, State, and local taxes and duties," as used in this clause, means all taxes and duties, in effect on the contract date, that the taxing authority is imposing and collecting on the transactions or property covered by this contract.

"After-imposed Federal tax," as used in this clause, means any new or increased Federal excise tax or duty, or tax that was exempted or excluded on the contract date but whose exemption was later revoked or reduced during the contract period, on the transactions or property covered by this contract that the Contractor is required to pay or bear as the result of legislative, judicial, or administrative action taking effect after the contract date. It does not include social security tax or other employment taxes.

"After-relieved Federal tax," as used in this clause, means any amount of Federal excise tax or duty, except social security or other employment taxes, that would otherwise have been payable on the transactions or property covered by this contract, but which the Contractor is not required to pay or bear, or for which the Contractor obtains a refund or drawback, as the result of legislative, judicial, or administrative action taking effect after the contract date.

- (b) The contract price includes all applicable Federal, State, and local taxes and duties.
- (c) The contract price shall be increased by the amount of any after-imposed Federal tax, provided the Contractor warrants in writing that no amount for such newly imposed Federal excise tax or duty or rate increase was included in the contract price, as a contingency reserve or otherwise.
- (d) The contract price shall be decreased by the amount of any after-relieved Federal tax.
- (e) The contract price shall be decreased by the amount of any Federal excise tax or duty, except social security or other employment taxes, that the Contractor is required to pay or bear, or does not obtain a refund of, through the Contractor's fault, negligence, or failure to follow instructions of the Contracting Officer.
- (f) No adjustment shall be made in the contract price under this clause unless the amount of the adjustment exceeds \$250.
- (g) The Contractor shall promptly notify the Contracting Officer of all matters relating to any Federal excise tax or duty that reasonably may be expected to result in either an increase or decrease in the contract price and shall take appropriate action as the Contracting Officer directs.
- (h) The Government shall, without liability, furnish evidence appropriate to establish exemption from any Federal, State, or local tax when the Contractor requests such evidence and a reasonable basis exists to sustain the exemption.

1.51 52.232-8 DISCOUNTS FOR PROMPT PAYMENT. (MAY 1997)

- (a) Discounts for prompt payment will not be considered in the evaluation of offers. However, any offered discount will form a part of the award, and will be taken if payment is made within the discount period indicated in the offer by the offeror. As an alternative to offering a prompt payment discount in conjunction with the offer, offerors awarded contracts may include prompt payment discounts on individual invoices.
- (b) In connection with any discount offered for prompt payment, time shall be computed from the date of the invoice. If the Contractor has not placed a date on the invoice, the due date shall be calculated from the date the designated billing office receives a proper invoice, provided the agency annotates such invoice with the date of receipt at the time of receipt. For the purpose of computing the discount earned, payment shall be considered to have been made on the date that appears on the payment check or, for an electronic funds transfer, the specified payment date. When the discount date falls on a Saturday, Sunday, or legal holiday when Federal Government offices are closed and Government business is not expected to be conducted, payment may be made on the following business day.

I.52 52.232-9 LIMITATION ON WITHHOLDING OF PAYMENTS. (APR 1984)

If more than one clause or Schedule term of this contract authorizes the temporary withholding of amounts otherwise payable to the Contractor for supplies delivered or services performed, the total of the amounts withheld at any one time shall not exceed the greatest amount that may be withheld under any one clause or Schedule term at that time; provided, that this limitation shall not apply to -

- (a) Withholdings pursuant to any clause relating to wages or hours of employees;
- (b) Withholdings not specifically provided for by this contract;
- (c) The recovery of overpayments; and
- (d) Any other withholding for which the Contracting Officer determines that this limitation is inappropriate.

I.53 52.232-17 INTEREST. (JUN 1996)

- (a) Except as otherwise provided in this contract under a Price Reduction for Defective Cost or Pricing Data clause or a Cost Accounting Standards clause, all amounts that become payable by the Contractor to the Government under this contract (net of any applicable tax credit under the Internal Revenue Code (26 U.S.C. 1481)) shall bear simple interest from the date due until paid unless paid within 30 days of becoming due. The interest rate shall be the interest rate established by the Secretary of the Treasury as provided in Section 12 of the Contract Disputes Act of 1978 (Public Law 95-563), which is applicable to the period in which the amount becomes due, as provided in paragraph (b) of this clause, and then at the rate applicable for each six-month period as fixed by the Secretary until the amount is paid.
- (b) Amounts shall be due at the earliest of the following dates:
 - (1) The date fixed under this contract.
 - (2) The date of the first written demand for payment consistent with this contract, including any demand resulting from a default termination.
 - (3) The date the Government transmits to the Contractor a proposed supplemental agreement to confirm completed negotiations establishing the amount of debt.
 - (4) If this contract provides for revision of prices, the date of written notice to the Contractor stating the amount of refund payable in connection with a pricing proposal or a negotiated pricing agreement not confirmed by contract modification.
- (c) The interest charge made under this clause may be reduced under the procedures prescribed in 32.614-2 of the Federal Acquisition Regulation in effect on the date of this contract.

I.54 52.232-18 AVAILABILITY OF FUNDS. (APR 1984)

Funds are not presently available for this contract. The Government's obligation under this contract is contingent upon the availability of appropriated funds from which payment for contract purposes can be made. No legal liability on the part of the Government for any payment may arise until funds are made available to the Contracting Officer for this contract and until the Contractor receives notice of such availability, to be confirmed in writing by the Contracting Officer.

I.55 52.232-23 ASSIGNMENT OF CLAIMS. (JAN 1986)

- (a) The Contractor, under the Assignment of Claims Act, as amended, 31 U.S.C. 3727, 41 U.S.C. 15 (hereafter referred to as "the Act"), may assign its rights to be paid amounts due or to become due as a result of the performance of this contract to a bank, trust company, or other financing institution, including any Federal lending agency. The assignee under such an assignment may thereafter further

assign or reassign its right under the original assignment to any type of financing institution described in the preceding sentence.

- (b) Any assignment or reassignment authorized under the Act and this clause shall cover all unpaid amounts payable under this contract, and shall not be made to more than one party, except that an assignment or reassignment may be made to one party as agent or trustee for two or more parties participating in the financing of this contract.
- (c) The Contractor shall not furnish or disclose to any assignee under this contract any classified document (including this contract) or information related to work under this contract until the Contracting Officer authorizes such action in writing.

I.56 52.232-25 PROMPT PAYMENT. (JUN 1997)

Notwithstanding any other payment clause in this contract, the Government will make invoice payments and contract financing payments under the terms and conditions specified in this clause. Payment shall be considered as being made on the day a check is dated or the date of an electronic funds transfer. Definitions of pertinent terms are set forth in section 32.902 of the Federal Acquisition Regulation. All days referred to in this clause are calendar days, unless otherwise specified. (However, see subparagraph (a)(4) of this clause concerning payments due on Saturdays, Sundays, and legal holidays.)

(a) Invoice payments -

(1) Due date.

- (i) Except as indicated in subparagraph (a)(2) and paragraph (c) of this clause, the due date for making invoice payments by the designated payment office shall be the later of the following two events:
 - (A) The 30th day after the designated billing office has received a proper invoice from the Contractor (except as provided in subdivision (a)(1)(ii) of this clause).
 - (B) The 30th day after Government acceptance of supplies delivered or services performed by the Contractor. On a final invoice where the payment amount is subject to contract settlement actions, acceptance shall be deemed to have occurred on the effective date of the contract settlement.
- (ii) If the designated billing office fails to annotate the invoice with the actual date of receipt at the time of receipt, the invoice payment due date shall be the 30th day after the date of the Contractor's invoice; provided a proper invoice is received and there is no disagreement over quantity, quality, or Contractor compliance with contract requirements.

(2) Certain food products and other payments.

- (i) Due dates on Contractor invoices for meat, meat food products, or fish; perishable agricultural commodities; and dairy products, edible fats or oils, and food products prepared from edible fats or oils are -
 - (A) For meat or meat food products, as defined in section 2(a)(3) of the Packers and Stockyard Act of 1921 (7 U.S.C. 182(3)), and as further defined in Pub. L. 98-181, including any edible fresh or frozen poultry meat, any perishable poultry meat food product, fresh eggs, and any perishable egg product, as close as possible to, but not later than, the 7th day after product delivery.
 - (B) For fresh or frozen fish, as defined in section 204(3) of the Fish and Seafood Promotion Act of 1986 (16 U.S.C. 4003(3)), as close as possible to, but not later than, the 7th day after product delivery.

- (C) For perishable agricultural commodities, as defined in section 1(4) of the Perishable Agricultural Commodities Act of 1930 (7 U.S.C. 499a(4)), as close as possible to, but not later than, the 10th day after product delivery, unless another date is specified in the contract.
 - (D) For dairy products, as defined in section 111(e) of the Dairy Production Stabilization Act of 1983 (7 U.S.C. 4502(e)), edible fats or oils, and food products prepared from edible fats or oils, as close as possible to, but not later than, the 10th day after the date on which a proper invoice has been received. Liquid milk, cheese, certain processed cheese products, butter, yogurt, ice cream, mayonnaise, salad dressings, and other similar products, fall within this classification. Nothing in the Act limits this classification to refrigerated products. When questions arise regarding the proper classification of a specific product, prevailing industry practices will be followed in specifying a contract payment due date. The burden of proof that a classification of a specific product is, in fact, prevailing industry practice is upon the Contractor making the representation.
- (ii) If the contract does not require submission of an invoice for payment (e.g., periodic lease payments), the due date will be as specified in the contract.
- (3) Contractor's invoice. The Contractor shall prepare and submit invoices to the designated billing office specified in the contract. A proper invoice must include the items listed in subdivisions (a)(3)(i) through (a)(3)(viii) of this clause. If the invoice does not comply with these requirements, it shall be returned within 7 days after the date the designated billing office received the invoice (3 days for meat, meat food products, or fish; 5 days for perishable agricultural commodities, edible fats or oils, and food products prepared from edible fats or oils), with a statement of the reasons why it is not a proper invoice. Untimely notification will be taken into account in computing any interest penalty owed the Contractor in the manner described in subparagraph (a)(5) of this clause.
- (i) Name and address of the Contractor.
 - (ii) Invoice date. (The Contractor is encouraged to date invoices as close as possible to the date of the mailing or transmission.)
 - (iii) Contract number or other authorization for supplies delivered or services performed (including order number and contract line item number).
 - (iv) Description, quantity, unit of measure, unit price, and extended price of supplies delivered or services performed.
 - (v) Shipping and payment terms (e.g., shipment number and date of shipment, prompt payment discount terms). Bill of lading number and weight of shipment will be shown for shipments on Government bills of lading.
 - (vi) Name and address of Contractor official to whom payment is to be sent (must be the same as that in the contract or in a proper notice of assignment).
 - (vii) Name (where practicable), title, phone number, and mailing address of person to be notified in the event of a defective invoice.
 - (viii) Any other information or documentation required by the contract (such as evidence of shipment).
 - (ix) While not required, the Contractor is strongly encouraged to assign an identification number to each invoice.
- (4) Interest penalty. An interest penalty shall be paid automatically by the designated payment office, without request from the Contractor, if payment is not made by the due date and the

conditions listed in subdivisions (a)(4)(i) through (a)(4)(iii) of this clause are met, if applicable. However, when the due date falls on a Saturday, Sunday, or legal holiday when Federal Government offices are closed and Government business is not expected to be conducted, payment may be made on the following business day without incurring a late payment interest penalty.

- (i) A proper invoice was received by the designated billing office.
 - (ii) A receiving report or other Government documentation authorizing payment was processed, and there was no disagreement over quantity, quality, or Contractor compliance with any contract term or condition.
 - (iii) In the case of a final invoice for any balance of funds due the Contractor for supplies delivered or services performed, the amount was not subject to further contract settlement actions between the Government and the Contractor.
- (5) Computing penalty amount. The interest penalty shall be at the rate established by the Secretary of the Treasury under section 12 of the Contract Disputes Act of 1978 (41 U.S.C. 611) that is in effect on the day after the due date, except where the interest penalty is prescribed by other governmental authority (e.g., tariffs). This rate is referred to as the "Renegotiation Board Interest Rate," and it is published in the Federal Register semiannually on or about January 1 and July 1. The interest penalty shall accrue daily on the invoice principal payment amount approved by the Government until the payment date of such approved principal amount; and will be compounded in 30-day increments inclusive from the first day after the due date through the payment date. That is, interest accrued at the end of any 30-day period will be added to the approved invoice principal payment amount and will be subject to interest penalties if not paid in the succeeding 30-day period. If the designated billing office failed to notify the Contractor of a defective invoice within the periods prescribed in subparagraph (a)(3) of this clause, the due date on the corrected invoice will be adjusted by subtracting from such date the number of days taken beyond the prescribed notification of defects period. Any interest penalty owed the Contractor will be based on this adjusted due date. Adjustments will be made by the designated payment office for errors in calculating interest penalties.
 - (i) For the sole purpose of computing an interest penalty that might be due the Contractor, Government acceptance shall be deemed to have occurred constructively on the 7th day (unless otherwise specified in this contract) after the Contractor delivered the supplies or performed the services in accordance with the terms and conditions of the contract, unless there is a disagreement over quantity, quality, or Contractor compliance with a contract provision. In the event that actual acceptance occurs within the constructive acceptance period, the determination of an interest penalty shall be based on the actual date of acceptance. The constructive acceptance requirement does not, however, compel Government officials to accept supplies or services, perform contract administration functions, or make payment prior to fulfilling their responsibilities.
 - (ii) The following periods of time will not be included in the determination of an interest penalty:
 - (A) The period taken to notify the Contractor of defects in invoices submitted to the Government, but this may not exceed 7 days (3 days for meat, meat food products, or fish; 5 days for perishable agricultural commodities, dairy products, edible fats or oils, and food products prepared from edible fats or oils).
 - (B) The period between the defects notice and resubmission of the corrected invoice by the Contractor.
 - (C) For incorrect electronic funds transfer (EFT) information, in accordance with the EFT clause of this contract.

- (iii) Interest penalties will not continue to accrue after the filing of a claim for such penalties under the clause at 52.233-1, Disputes, or for more than 1 year. Interest penalties of less than \$1 need not be paid.
- (iv) Interest penalties are not required on payment delays due to disagreement between the Government and the Contractor over the payment amount or other issues involving contract compliance or on amounts temporarily withheld or retained in accordance with the terms of the contract. Claims involving disputes, and any interest that may be payable, will be resolved in accordance with the clause at 52.233-1, Disputes.
- (6) Prompt payment discounts. An interest penalty also shall be paid automatically by the designated payment office, without request from the Contractor, if a discount for prompt payment is taken improperly. The interest penalty will be calculated as described in subparagraph (a)(5) of this clause on the amount of discount taken for the period beginning with the first day after the end of the discount period through the date when the Contractor is paid.
- (7) Additional interest penalty.
 - (i) A penalty amount, calculated in accordance with subdivision (a)(7)(iii) of this clause, shall be paid in addition to the interest penalty amount if the Contractor-
 - (A) Is owed an interest penalty of \$1 or more;
 - (B) Is not paid the interest penalty within 10 days after the date the invoice amount is paid; and
 - (C) Makes a written demand to the designated payment office for additional penalty payment, in accordance with subdivision (a)(7)(ii) of this clause, postmarked not later than 40 days after the invoice amount is paid.
 - (ii)(A) Contractors shall support written demands for additional penalty payments with the following data. No additional data shall be required. Contractors shall-
 - (1) Specifically assert that late payment interest is due under a specific invoice, and request payment of all overdue late payment interest penalty and such additional penalty as may be required;
 - (2) Attach a copy of the invoice on which the unpaid late payment interest was due; and
 - (3) State that payment of the principal has been received, including the date of receipt.
 - (B) Demands must be postmarked on or before the 40th day after payment was made, except that -
 - (1) If the postmark is illegible or nonexistent, the demand must have been received and annotated with the date of receipt by the designated payment office on or before the 40th day after payment was made; or
 - (2) If the postmark is illegible or nonexistent and the designated payment office fails to make the required annotation, the demand's validity will be determined by the date the Contractor has placed on the demand; provided such date is no later than the 40th day after payment was made.

(iii)(A) The additional penalty shall be equal to 100 percent of any original late payment interest penalty except -

- (1) The additional penalty shall not exceed \$5,000;
- (2) The additional penalty shall never be less than \$25; and
- (3) No additional penalty is owed if the amount of the underlying interest penalty is less than \$1.

(B) If the interest penalty ceases to accrue in accordance with the limits stated in subdivision (a)(5)(iii) of this clause, the amount of the additional penalty shall be calculated on the amount of interest penalty that would have accrued in the absence of these limits, subject to the overall limits on the additional penalty specified in subdivision (a)(7)(iii)(A) of this clause.

(C) For determining the maximum and minimum additional penalties, the test shall be the interest penalty due on each separate payment made for each separate contract. The maximum and minimum additional penalty shall not be based upon individual invoices unless the invoices are paid separately. Where payments are consolidated for disbursing purposes, the maximum and minimum additional penalty determination shall be made separately for each contract therein.

(D) The additional penalty does not apply to payments regulated by other Government regulations (e.g., payments under utility contracts subject to tariffs and regulation).

(b) Contract financing payments -

(1) Due dates for recurring financing payments. If this contract provides for contract financing, requests for payment shall be submitted to the designated billing office as specified in this contract or as directed by the Contracting Officer. Contract financing payments shall be made on the [insert day as prescribed by Agency head; if not prescribed, insert 30th day] day after receipt of a proper contract financing request by the designated billing office. In the event that an audit or other review of a specific financing request is required to ensure compliance with the terms and conditions of the contract, the designated payment office is not compelled to make payment by the due date specified.

(2) Due dates for other contract financing. For advance payments, loans, or other arrangements that do not involve recurring submissions of contract financing requests, payment shall be made in accordance with the corresponding contract terms or as directed by the Contracting Officer.

(3) Interest penalty not applicable. Contract financing payments shall not be assessed an interest penalty for payment delays.

(c) Fast payment procedure due dates. If this contract contains the clause at 52.213-1, Fast Payment Procedure, payments will be made within 15 days after the date of receipt of the invoice.

I.57 52.233-1 DISPUTES. (OCT 1995)

(a) This contract is subject to the Contract Disputes Act of 1978, as amended (41 U.S.C. 601-613).

(b) Except as provided in the Act, all disputes arising under or relating to this contract shall be resolved under this clause.

(c) "Claim," as used in this clause, means a written demand or written assertion by one of the contracting parties seeking, as a matter of right, the payment of money in a sum certain, the adjustment or interpretation of contract terms, or other relief arising under or relating to this contract. A claim arising

under a contract, unlike a claim relating to that contract, is a claim that can be resolved under a contract clause that provides for the relief sought by the claimant. However, a written demand or written assertion by the Contractor seeking the payment of money exceeding \$100,000 is not a claim under the Act until certified as required by subparagraph (d)(2) of this clause. A voucher, invoice, or other routine request for payment that is not in dispute when submitted is not a claim under the Act. The submission may be converted to a claim under the Act, by complying with the submission and certification requirements of this clause, if it is disputed either as to liability or amount or is not acted upon in a reasonable time.

- (d)(1) A claim by the Contractor shall be made in writing and, unless otherwise stated in this contract, submitted within 6 years after accrual of the claim to the Contracting Officer for a written decision. A claim by the Government against the Contractor shall be subject to a written decision by the Contracting Officer.
- (2)(i) Contractors shall provide the certification specified in subparagraph (d)(2)(iii) of this clause when submitting any claim -
 - (A) Exceeding \$100,000; or
 - (B) Regardless of the amount claimed, when using -
 - (1) Arbitration conducted pursuant to 5 U.S.C. 575-580; or
 - (2) Any other alternative means of dispute resolution (ADR) technique that the agency elects to handle in accordance with the Administrative Dispute Resolution Act (ADRA).
- (ii) The certification requirement does not apply to issues in controversy that have not been submitted as all or part of a claim.
- (iii) The certification shall state as follows: "I certify that the claim is made in good faith; that the supporting data are accurate and complete to the best of my knowledge and belief; that the amount requested accurately reflects the contract adjustment for which the Contractor believes the Government is liable; and that I am duly authorized to certify the claim on behalf of the Contractor."
- (3) The certification may be executed by any person duly authorized to bind the Contractor with respect to the claim.
- (e) For Contractor claims of \$100,000 or less, the Contracting Officer must, if requested in writing by the Contractor, render a decision within 60 days of the request. For Contractor-certified claims over \$100,000, the Contracting Officer must, within 60 days, decide the claim or notify the Contractor of the date by which the decision will be made.
- (f) The Contracting Officer's decision shall be final unless the Contractor appeals or files a suit as provided in the Act.
- (g) If the claim by the Contractor is submitted to the Contracting Officer or a claim by the Government is presented to the Contractor, the parties, by mutual consent, may agree to use ADR. If the Contractor refuses an offer for alternative disputes resolution, the Contractor shall inform the Contracting Officer, in writing, of the Contractor's specific reasons for rejecting the request. When using arbitration conducted pursuant to 5 U.S.C. 575-580, or when using any other ADR technique that the agency elects to handle in accordance with the ADRA, any claim, regardless of amount, shall be accompanied by the certification described in subparagraph (d)(2)(iii) of this clause, and executed in accordance with subparagraph (d)(3) of this clause.
- (h) The Government shall pay interest on the amount found due and unpaid from (1) the date that the Contracting Officer receives the claim (certified, if required); or (2) the date that payment otherwise would be due, if that date is later, until the date of payment. With regard to claims having defective certifications, as defined in FAR 33.201, interest shall be paid from the date that the Contracting Officer

initially receives the claim. Simple interest on claims shall be paid at the rate, fixed by the Secretary of the Treasury as provided in the Act, which is applicable to the period during which the Contracting Officer receives the claim and then at the rate applicable for each 6-month period as fixed by the Treasury Secretary during the pendency of the claim.

- (i) The Contractor shall proceed diligently with performance of this contract, pending final resolution of any request for relief, claim, appeal, or action arising under the contract, and comply with any decision of the Contracting Officer.

I.58 52.233-3 PROTEST AFTER AWARD. (AUG 1996)

- (a) Upon receipt of a notice of protest (as defined in FAR 33.101) or a determination that a protest is likely (see FAR 33.102(d)), the Contracting Officer may, by written order to the Contractor, direct the Contractor to stop performance of the work called for by this contract. The order shall be specifically identified as a stop-work order issued under this clause. Upon receipt of the order, the Contractor shall immediately comply with its terms and take all reasonable steps to minimize the incurrence of costs allocable to the work covered by the order during the period of work stoppage. Upon receipt of the final decision in the protest, the Contracting Officer shall either -
 - (1) Cancel the stop-work order; or
 - (2) Terminate the work covered by the order as provided in the Default, or the Termination for Convenience of the Government, clause of this contract.
- (b) If a stop-work order issued under this clause is canceled either before or after a final decision in the protest, the Contractor shall resume work. The Contracting Officer shall make an equitable adjustment in the delivery schedule or contract price, or both, and the contract shall be modified, in writing, accordingly, if -
 - (1) The stop-work order results in an increase in the time required for, or in the Contractor's cost properly allocable to, the performance of any part of this contract; and
 - (2) The Contractor asserts its right to an adjustment within 30 days after the end of the period of work stoppage; provided, that if the Contracting Officer decides the facts justify the action, the Contracting Officer may receive and act upon a proposal at any time before final payment under this contract.
- (c) If a stop-work order is not canceled and the work covered by the order is terminated for the convenience of the Government, the Contracting Officer shall allow reasonable costs resulting from the stop-work order in arriving at the termination settlement.
- (d) If a stop-work order is not canceled and the work covered by the order is terminated for default, the Contracting Officer shall allow, by equitable adjustment or otherwise, reasonable costs resulting from the stop-work order.
- (e) The Government's rights to terminate this contract at any time are not affected by action taken under this clause.
- (f) If, as the result of the Contractor's intentional or negligent misstatement, misrepresentation, or miscertification, a protest related to this contract is sustained, and the Government pays costs, as provided in FAR 33.102(b)(2) or 33.104(h)(1), the Government may require the Contractor to reimburse the Government the amount of such costs. In addition to any other remedy available, and pursuant to the requirements of Subpart 32.6, the Government may collect this debt by offsetting the amount against any payment due the Contractor under any contract between the Contractor and the Government.

I.59 52.237-2 PROTECTION OF GOVERNMENT BUILDINGS, EQUIPMENT, AND VEGETATION. (APR 1984)

The Contractor shall use reasonable care to avoid damaging existing buildings, equipment, and vegetation on the Government installation. If the Contractor's failure to use reasonable care causes damage to any of this property, the Contractor shall replace or repair the damage at no expense to the Government as the Contracting Officer directs. If the Contractor fails or refuses to make such repair or replacement, the Contractor shall be liable for the cost, which may be deducted from the contract price.

I.60 52.237-3 CONTINUITY OF SERVICES. (JAN 1991)

(a) The Contractor recognizes that the services under this contract are vital to the Government and must be continued without interruption and that, upon contract expiration, a successor, either the Government or another contractor, may continue them. The Contractor agrees to -

- (1) Furnish phase-in training; and
 - (2) Exercise its best efforts and cooperation to effect an orderly and efficient transition to a successor.
- (b) The Contractor shall, upon the Contracting Officer's written notice, (1) furnish phase-in, phase-out services for up to 90 days after this contract expires and (2) negotiate in good faith a plan with a successor to determine the nature and extent of phase-in, phase-out services required. The plan shall specify a training program and a date for transferring responsibilities for each division of work described in the plan, and shall be subject to the Contracting Officer's approval. The Contractor shall provide sufficient experienced personnel during the phase-in, phase-out period to ensure that the services called for by this contract are maintained at the required level of proficiency.
- (c) The Contractor shall allow as many personnel as practicable to remain on the job to help the successor maintain the continuity and consistency of the services required by this contract. The Contractor also shall disclose necessary personnel records and allow the successor to conduct on-site interviews with these employees. If selected employees are agreeable to the change, the Contractor shall release them at a mutually agreeable date and negotiate transfer of their earned fringe benefits to the successor.
- (d) The Contractor shall be reimbursed for all reasonable phase-in, phase-out costs (i.e., costs incurred within the agreed period after contract expiration that result from phase-in, phase-out operations) and a fee (profit) not to exceed a pro rata portion of the fee (profit) under this contract.

I.61 52.246-6 INSPECTION-TIME-AND-MATERIAL AND LABOR HOUR (JAN 1986)

(a) Definitions. "Contractor's managerial personnel," as used in this clause, means any of the Contractor's directors, officers, managers, superintendents, or equivalent representatives who have supervision or direction of--

- (1) All or substantially all of the Contractor's business;
- (2) All or substantially all of the Contractor's operation at any one plant or separate location at which the contract is being performed; or
- (3) A separate and complete major industrial operation connected with the performance of this contract.

"Materials," as used herein this clause, includes data when the contract does not include the Warranty of Data clause.

(b) The Contractor shall provide and maintain an inspection system acceptable to the Government covering the material, fabricating methods, work, and services under this contract. Complete records of all inspection work performed by the Contractor shall be maintained and made available to the Government during contract performance and for as long afterwards as the contract requires.

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(c) The Government has the right to inspect and test all materials furnished and services performed under this contract, to the extent practicable at all places and times, including the period of performance, and in any event before acceptance. The Government may also inspect the plant or plants of the Contractor or any subcontractor engaged in contract performance. The Government shall perform inspections and tests in a manner that will not unduly delay the work.

(d) If the Government performs inspection or test on the premises of the Contractor or a subcontractor, the Contractor shall furnish and shall require subcontractors to furnish all reasonable facilities and assistance for the safe and convenient performance of these duties.

(e) Unless otherwise specified in the contract, the Government shall accept or reject services and materials at the place of delivery as promptly as practicable after delivery, and they shall be presumed accepted 60 days after the date of delivery, unless accepted earlier.

(f) At any time during contract performance, but not later than 6 months (or such other time as may be specified in the contract) after acceptance of the services or materials last delivered under this contract, the Government may require the Contractor to replace or correct services or materials that at time of delivery failed to meet contract requirements. Except as otherwise specified in paragraph (h) of this clause, the cost of replacement or correction shall be determined under the Payment Under Time-and-Materials and Labor-Hour Contracts clause, but the "hourly rate" for labor hours incurred in the replacement or correction shall be reduced to exclude that portion of the rate attributable to profit. The Contractor shall not tender for acceptance materials and services required to be replaced or corrected without disclosing the former requirement for replacement or correction, and, when required, shall disclose the corrective action taken.

(g)(1) If the contractor fails to proceed with reasonable promptness to perform required replacement or correction, and if the replacement or correction can be performed within the ceiling price (or the ceiling price as increased by the Government), the Government may—

(i) By contract or otherwise, perform the replacement or correction, charge to the contractor any increased cost, or deduct such increased cost from any amounts paid or due under this contract; or

(ii) Terminate this contract for default.

(2) Failure to agree to the amount of increased cost to be charged to the contractor shall be a dispute.

(h) Notwithstanding paragraphs (f) and (g) above, the Government may at any time require the Contractor to remedy by correction or replacement, without cost to the Government, any failure by the Contractor to comply with the requirements of this contract, if the failure is due to—

(1) Fraud, lack of good faith, or willful misconduct on the part of the Contractor's managerial personnel;
or

(2) The conduct of one or more of the Contractor's employees selected or retained by the Contractor after any of the Contractor's managerial personnel has reasonable grounds to believe that the employee is habitually careless or unqualified.

(i) This clause applied in the same manner and to the same extent to corrected or replacement materials or services as to materials and services originally delivered under this contract.

(j) The contractor has no obligation or liability under this contract to correct or replace materials and services that at time of delivery do not meet contract requirements, except as provided in this clause or as may be otherwise specified in the contract.

(k) Unless otherwise specified in the contract, the Contractor's obligation to correct or replace Government-furnished property shall be governed by the clause pertaining to Government property.

I.62 52.237-10 IDENTIFICATION OF UNCOMPENSATED OVERTIME. (OCT 1997)

(a) Definitions. As used in this provision -

"Uncompensated overtime" means the hours worked without additional compensation in excess of an average of 40 hours per week by direct charge employees who are exempt from the Fair Labor Standards Act. Compensated personal absences such as holidays, vacations, and sick leave shall be included in the normal work week for purposes of computing uncompensated overtime hours.

"Uncompensated overtime rate" is the rate that results from multiplying the hourly rate for a 40-hour work week by 40, and then dividing by the proposed hours per week. For example, 45 hours proposed on a 40-hour work week basis at \$20 per hour would be converted to an uncompensated overtime rate of \$17.78 per hour ($\$20.00 \times 40 \text{ divided by } 45 = \17.78).

- (b)** For any proposed hours against which an uncompensated overtime rate is applied, the offeror shall identify in its proposal the hours in excess of an average of 40 hours per week, by labor category at the same level of detail as compensated hours, and the uncompensated overtime rate per hour, whether at the prime or subcontract level. This includes uncompensated overtime hours that are in indirect cost pools for personnel whose regular hours are normally charged direct.
- (c)** The offeror's accounting practices used to estimate uncompensated overtime must be consistent with its cost accounting practices used to accumulate and report uncompensated overtime hours.
- (d)** Proposals that include unrealistically low labor rates, or that do not otherwise demonstrate cost realism, will be considered in a risk assessment and will be evaluated for award in accordance with that assessment.
- (e)** The offeror shall include a copy of its policy addressing uncompensated overtime with its proposal.

I.63 52.242-1 NOTICE OF INTENT TO DISALLOW COSTS. (APR 1984)

(a) Notwithstanding any other clause of this contract -

- (1)** The Contracting Officer may at any time issue to the Contractor a written notice of intent to disallow specified costs incurred or planned for incurrence under this contract that have been determined not to be allowable under the contract terms; and
- (2)** The Contractor may, after receiving a notice under subparagraph (1) above, submit a written response to the Contracting Officer, with justification for allowance of the costs. If the Contractor does respond within 60 days, the Contracting Officer shall, within 60 days of receiving the response, either make a written withdrawal of the notice or issue a written decision.

- (b)** Failure to issue a notice under this Notice of Intent to Disallow Costs clause shall not affect the Government's rights to take exception to incurred costs.

I.64 52.242-13 BANKRUPTCY. (JUL 1995)

In the event the Contractor enters into proceedings relating to bankruptcy, whether voluntary or involuntary, the Contractor agrees to furnish, by certified mail or electronic commerce method authorized by the contract, written notification of the bankruptcy to the Contracting Officer responsible for administering the contract. This notification shall be furnished within five days of the initiation of the proceedings relating to bankruptcy filing. This notification shall include the date on which the bankruptcy petition was filed, the identity of the court in which the bankruptcy petition was filed, and a listing of Government contract numbers and contracting offices for all Government contracts against which final payment has not been made. This obligation remains in effect until final payment under this contract.

I.65 52.243-1 CHANGES - FIXED-PRICE. (AUG 1987) – ALTERNATE I (APR 1984)

- (a) The Contracting Officer may at any time, by written order, and without notice to the sureties, if any, make changes within the general scope of this contract in any one or more of the following:
 - (1) Description of services to be performed.
 - (2) Time of performance (i.e., hours of the day, days of the week, etc.).
 - (3) Place of performance of the services.
- (b) If any such change causes an increase or decrease in the cost of, or the time required for, performance of any part of the work under this contract, whether or not changed by the order, the Contracting Officer shall make an equitable adjustment in the contract price, the delivery schedule, or both, and shall modify the contract.
- (c) The Contractor must assert its right to an adjustment under this clause within 30 days from the date of receipt of the written order. However, if the Contracting Officer decides that the facts justify it, the Contracting Officer may receive and act upon a proposal submitted before final payment of the contract.
- (d) If the Contractor's proposal includes the cost of property made obsolete or excess by the change, the Contracting Officer shall have the right to prescribe the manner of the disposition of the property.
- (e) Failure to agree to any adjustment shall be a dispute under the Disputes clause. However, nothing in this clause shall excuse the Contractor from proceeding with the contract as changed.

I.66 52.243-3 CHANGES - TIME-AND-MATERIALS OR LABOR-HOURS. (AUG 1987)

- (a) The Contracting Officer may at any time, by written order, and without notice to the sureties, if any, make changes within the general scope of this contract in any one or more of the following:
 - (1) Drawings, designs, or specifications.
 - (2) Method of shipment or packing.
 - (3) Place of delivery.
 - (4) Amount of Government-furnished property.
- (b) If any change causes an increase or decrease in any hourly rate, the ceiling price, or the time required for performance of any part of the work under this contract, whether or not changed by the order, or otherwise affects any other terms and conditions of this contract, the Contracting Officer shall make an equitable adjustment in the -
 - (1) Ceiling price;
 - (2) Hourly rates;
 - (3) Delivery schedule; and
 - (4) Other affected terms, and shall modify the contract accordingly.
- (c) The Contractor must assert its right to an adjustment under this clause within 30 days from the date of receipt of the written order. However, if the Contracting Officer decides that the facts justify it, the Contracting Officer may receive and act upon a proposal submitted before final payment of the contract.

- (d) Failure to agree to any adjustment shall be a dispute under the Disputes clause. However, nothing in this clause shall excuse the Contractor from proceeding with the contract as changed.

1.67 52.244-1 SUBCONTRACTS (FIXED-PRICE CONTRACTS) (OCT 1997)

- (a) This clause does not apply to firm-fixed-price contracts and fixed-price contracts with economic price adjustment. However, it does apply to subcontracts resulting from unpriced modifications to such contracts.

- (b) "Subcontract," as used in this clause, includes but is not limited to purchase orders, and changes and modifications to purchase orders. The Contractor shall notify the Contracting Officer reasonably in advance of entering into any subcontract if the Contractor does not have an approved purchasing system and if the subcontract—

- (1) Is proposed to exceed \$100,000; or
- (2) Identification of the type of subcontract to be used;
- (3) Identification of the proposed subcontract and an explanation of why and how the proposed subcontractor was selected, including the competition obtained;
- (4) The proposed subcontract price and the Contractor's cost or price analysis;
- (5) The subcontractor's current, complete, and accurate cost or pricing data and Certificate of Current Cost or Pricing Data, if required by other contract provisions;
- (6) The subcontractor's Disclosure Statement or Certificate relating to Cost Accounting Standards when such data are required by other provisions of this contract; and
- (7) A negotiation memorandum reflecting—
 - (i) The principal elements of the subcontract price negotiations;
 - (ii) The most significant considerations controlling establishment of initial or revised prices;
 - (iii) The reason cost or pricing data were or were not required;
 - (iv) The extent, if any, to which the Contractor did not rely on the subcontractor's cost or pricing data in determining the price objective and in negotiating the final price;
 - (v) The extent, if any, to which it was recognized in the negotiation that the subcontractor's cost or pricing data were not accurate, complete, or current; the action taken by the Contracting and subcontractor; and the effect of any such defective data on the total price negotiated.
 - (vi) The reasons for any significant difference between the Contractor's price objective and the price negotiated; and
 - (vii) A complete explanation of the incentive fee or profit plan when incentives are used. The explanation shall identify each critical performance element, management decisions used to quantify each incentive element, reasons for the incentives, and a summary of all trade-off possibilities considered.

- (d) The Contractor shall obtain the Contracting Officer's written consent before placing any subcontract for which advance notification is required under paragraph (b) above. However, the Contracting Officer may ratify in writing any such subcontract. Ratification shall constitute the consent of the Contracting Officer.

- (e) Even if the Contractor's purchasing system has been approved, the Contractor shall obtain the Contracting Officer's written consent before placing subcontracts identified below:

- (f) Unless the consent or approval specifically provides otherwise, neither consent by the Contracting Officer to any subcontract nor approval of the Contractor's purchasing system shall constitute a determination--

- (1) Of the acceptability of any subcontract terms and conditions;
- (2) Of the acceptability of any subcontract price or of any amount paid under any subcontract; or
- (3) To relieve the Contractor of any responsibility for performing this contract.

- (g) No subcontract placed under this contract shall provide for payment on a cost-plus-a-percentage-of-cost basis, and any fee payable under cost-reimbursement subcontracts shall not exceed the fee limitations in subsection 15.404-4(c)(4)(i) of the Federal Acquisition Regulation (FAR).

- (h) The Government reserves the right to review the Contractor's purchasing system as set forth in FAR Subpart 44.3.

I.68 52.244-3 SUBCONTRACTS (TIME-AND-MATERIALS AND LABOR-HOUR CONTRACTS)(OCT 1997)

- (a) "Subcontract," as used in this clause, includes but is not limited to purchase orders, and changes and modifications to purchase orders. The Contractor shall obtain the Contracting Officer's written consent before placing any subcontract for furnishing any of the work called for in this contract, except for purchase of raw material or commercial stock items.

- (b) No subcontract placed under this contract shall provide for payment on a cost-plus-a-percentage-of-cost basis, and any fee payable under cost-reimbursement subcontracts shall not exceed the fee limitations in subsection 15.404-4(c)(4)(i) of the Federal Acquisition Regulation (FAR).

- (c) The Government reserves the right to review the Contractor's purchasing system as set forth in FAR Subpart 44.3.

- (d) Unless the consent or approval specifically provides otherwise, neither consent by the Contracting Officer to any subcontract nor approval of the Contractor's purchasing system shall constitute a determination--

- (1) Of the acceptability of any subcontract terms or conditions;
- (2) Of the acceptability of any subcontract price or of any amount paid under any subcontract; or
- (3) To relieve the Contractor of any responsibility for performing this contract.

I.69 52.244-6 SUBCONTRACTS FOR COMMERCIAL ITEMS AND COMMERCIAL COMPONENTS. (APR 1998)

- (a) Definitions.

"Commercial item," as used in this clause, has the meaning contained in the clause at 52.202-1, Definitions.

"Subcontract," as used in this clause, includes a transfer of commercial items between divisions, subsidiaries, or affiliates of the Contractor or subcontractor at any tier.

- (b) To the maximum extent practicable, the Contractor shall incorporate, and require its subcontractors at all tiers to incorporate, commercial items or nondevelopmental items as components of items to be supplied under this contract.
- (c) Notwithstanding any other clause of this contract, the Contractor is not required to include any FAR provision or clause, other than those listed below to the extent they are applicable and as may be required to establish the reasonableness of prices under Part 15, in a subcontract at any tier for commercial items or commercial components:
 - (1) 52.222-26, Equal Opportunity (E.O. 11246);
 - (2) 52.222-35, Affirmative Action for Disabled Veterans and Veterans of the Vietnam Era (38 U.S.C. 4212(a));
 - (3) 52.222-36, Affirmative Action for Handicapped Workers (29 U.S.C. 793); and
 - (4) 52.247-64, Preference for Privately Owned U.S.-Flagged Commercial Vessels (46 U.S.C. 1241) (flow down not required for subcontracts awarded beginning May 1, 1996).
- (d) The Contractor shall include the terms of this clause, including this paragraph (d), in subcontracts awarded under this contract.

I.70 52.245-1 PROPERTY RECORDS. (APR 1984)

The Government shall maintain the Government's official property records in connection with Government property under this contract. The Government Property clause is hereby modified by deleting the requirement for the Contractor to maintain such records.

I.71 52.245-2 GOVERNMENT PROPERTY (FIXED-PRICE CONTRACTS). (DEC 1989)

- (a) Government-furnished property.
 - (1) The Government shall deliver to the Contractor, for use in connection with and under the terms of this contract, the Government-furnished property described in the Schedule or specifications together with any related data and information that the Contractor may request and is reasonably required for the intended use of the property (hereinafter referred to as "Government-furnished property").
 - (2) The delivery or performance dates for this contract are based upon the expectation that Government-furnished property suitable for use (except for property furnished "as is") will be delivered to the Contractor at the times stated in the Schedule or, if not so stated, in sufficient time to enable the Contractor to meet the contract's delivery or performance dates.
 - (3) If Government-furnished property is received by the Contractor in a condition not suitable for the intended use, the Contractor shall, upon receipt of it, notify the Contracting Officer, detailing the facts, and, as directed by the Contracting Officer and at Government expense, either repair, modify, return, or otherwise dispose of the property. After completing the directed action and upon written request of the Contractor, the Contracting Officer shall make an equitable adjustment as provided in paragraph (h) of this clause.
 - (4) If Government-furnished property is not delivered to the Contractor by the required time, the Contracting Officer shall, upon the Contractor's timely written request, make a determination of the delay, if any, caused the Contractor and shall make an equitable adjustment in accordance with paragraph (h) of this clause.
- (b) Changes in Government-furnished property.
 - (1) The Contracting Officer may, by written notice, (i) decrease the Government-furnished property provided or to be provided under this contract, or (ii) substitute other Government-furnished property for the property to be provided by the Government, or to be acquired by the

Contractor for the Government, under this contract. The Contractor shall promptly take such action as the Contracting Officer may direct regarding the removal, shipment, or disposal of the property covered by such notice.

- (2) Upon the Contractor's written request, the Contracting Officer shall make an equitable adjustment to the contract in accordance with paragraph (h) of this clause, if the Government has agreed in the Schedule to make the property available for performing this contract and there is any -

- (i) Decrease or substitution in this property pursuant to subparagraph (b)(1) of this clause; or
- (ii) Withdrawal of authority to use this property, if provided under any other contract or lease.

(c) Title in Government property.

- (1) The Government shall retain title to all Government-furnished property.
- (2) All Government-furnished property and all property acquired by the Contractor, title to which vests in the Government under this paragraph (collectively referred to as "Government property"), are subject to the provisions of this clause. However, special tooling accountable to this contract is subject to the provisions of the Special Tooling clause and is not subject to the provisions of this clause. Title to Government property shall not be affected by its incorporation into or attachment to any property not owned by the Government, nor shall Government property become a fixture or lose its identity as personal property by being attached to any real property.
- (3) Title to each item of facilities and special test equipment acquired by the Contractor for the Government under this contract shall pass to and vest in the Government when its use in performing this contract commences or when the Government has paid for it, whichever is earlier, whether or not title previously vested in the Government.
- (4) If this contract contains a provision directing the Contractor to purchase material for which the Government will reimburse the Contractor as a direct item of cost under this contract -
 - (i) Title to material purchased from a vendor shall pass to and vest in the Government upon the vendor's delivery of such material; and
 - (ii) Title to all other material shall pass to and vest in the Government upon -
 - (A) Issuance of the material for use in contract performance;
 - (B) Commencement of processing of the material or its use in contract performance; or
 - (C) Reimbursement of the cost of the material by the Government, whichever occurs first.

- (d) Use of Government property. The Government property shall be used only for performing this contract, unless otherwise provided in this contract or approved by the Contracting Officer.

(e) Property administration.

- (1) The Contractor shall be responsible and accountable for all Government property provided under this contract and shall comply with Federal Acquisition Regulation (FAR) Subpart 45.5, as in effect on the date of this contract.

- (2) The Contractor shall establish and maintain a program for the use, maintenance, repair, protection, and preservation of Government property in accordance with sound industrial practice and the applicable provisions of Subpart 45.5 of the FAR.
 - (3) If damage occurs to Government property, the risk of which has been assumed by the Government under this contract, the Government shall replace the items or the Contractor shall make such repairs as the Government directs. However, if the Contractor cannot effect such repairs within the time required, the Contractor shall dispose of the property as directed by the Contracting Officer. When any property for which the Government is responsible is replaced or repaired, the Contracting Officer shall make an equitable adjustment in accordance with paragraph (h) of this clause.
 - (4) The Contractor represents that the contract price does not include any amount for repairs or replacement for which the Government is responsible. Repair or replacement of property for which the Contractor is responsible shall be accomplished by the Contractor at its own expense.
- (f) Access. The Government and all its designees shall have access at all reasonable times to the premises in which any Government property is located for the purpose of inspecting the Government property.
 - (g) Risk of loss. Unless otherwise provided in this contract, the Contractor assumes the risk of, and shall be responsible for, any loss or destruction of, or damage to, Government property upon its delivery to the Contractor or upon passage of title to the Government under paragraph (c) of this clause. However, the Contractor is not responsible for reasonable wear and tear to Government property or for Government property properly consumed in performing this contract.
 - (h) Equitable adjustment. When this clause specifies an equitable adjustment, it shall be made to any affected contract provision in accordance with the procedures of the Changes clause. When appropriate, the Contracting Officer may initiate an equitable adjustment in favor of the Government. The right to an equitable adjustment shall be the Contractor's exclusive remedy. The Government shall not be liable to suit for breach of contract for -
 - (1) Any delay in delivery of Government-furnished property;
 - (2) Delivery of Government-furnished property in a condition not suitable for its intended use;
 - (3) A decrease in or substitution of Government-furnished property; or
 - (4) Failure to repair or replace Government property for which the Government is responsible.
 - (i) Final accounting and disposition of Government property. Upon completing this contract, or at such earlier dates as may be fixed by the Contracting Officer, the Contractor shall submit, in a form acceptable to the Contracting Officer, inventory schedules covering all items of Government property (including any resulting scrap) not consumed in performing this contract or delivered to the Government. The Contractor shall prepare for shipment, deliver f.o.b. origin, or dispose of the Government property as may be directed or authorized by the Contracting Officer. The net proceeds of any such disposal shall be credited to the contract price or shall be paid to the Government as the Contracting Officer directs.
 - (j) Abandonment and restoration of Contractor's premises. Unless otherwise provided herein, the Government -
 - (1) May abandon any Government property in place, at which time all obligations of the Government regarding such abandoned property shall cease; and
 - (2) Has no obligation to restore or rehabilitate the Contractor's premises under any circumstances (e.g., abandonment, disposition upon completion of need, or upon contract completion). However, if the Government-furnished property (listed in the Schedule or specifications) is

withdrawn or is unsuitable for the intended use, or if other Government property is substituted, then the equitable adjustment under paragraph (h) of this clause may properly include restoration or rehabilitation costs.

- (k) Communications. All communications under this clause shall be in writing.
- (l) Overseas contracts. If this contract is to be performed outside of the United States of America, its territories, or possessions, the words "Government" and "Government-furnished" (wherever they appear in this clause) shall be construed as "United States Government" and "United States Government-furnished," respectively.

I.72 52.246-4 INSPECTION OF SERVICES--FIXED PRICE (FIXED-PRICE)

- (a) Definitions: "Services," as used in this clause, includes services performed, workmanship, and material furnished or utilized in the performance of services.
- (b) The Contractor shall provide and maintain an inspection system acceptable to the Government covering the services under this contract. Complete records of all inspection work performed by the Contractor shall be maintained and made available to the Government during contract performance and for as long afterwards as the contract requires.
- (c) The Government has the right to inspect and test all services called for by the contract, to the extent practicable at all times and places during the term of the contract. The Government shall perform inspections and tests in a manner that will not unduly delay the work.
- (d) If the Government performs inspections or tests on the premises of the Contractor or a subcontractor, the Contractor shall furnish, and shall require subcontractors to furnish, at no increase in contract price, all reasonable facilities and assistance for the safe and convenient performance of these duties.
- (e) If any of the services do not conform with contract requirements, the Government may require the Contractor to perform the services again in conformity with contract requirements, at no increase in contract amount. When the defects in services cannot be corrected by reperformance, the Government may--
 - (1) Require the Contractor to take necessary action to ensure that future performance conforms to contract requirements; and
 - (2) Reduce the contract price to reflect the reduced value of the services performed.
- (f) If the Contractor fails to promptly perform the services again or to take the necessary action to ensure future performance in conformity with contract requirements, the Government may--
 - (1) By contract or otherwise, perform the services and charge to the Contractor any cost incurred by the Government that is directly related to the performance of such service; or
 - (2) Terminate the contract for default.

I.73 52.245-5 GOVERNMENT PROPERTY (COST-REIMBURSEMENT, TIME-AND-MATERIAL, OR LABOR-HOUR CONTRACTS). (JAN 1986)

- (a) Government-furnished property.
 - (1) The term "Contractor's managerial personnel," as used in paragraph (g) of this clause, means any of the Contractor's directors, officers, managers, superintendents, or equivalent representatives who have supervision or direction of -
 - (i) All or substantially all of the Contractor's business;

- (ii) All or substantially all of the Contractor's operation at any one plant, or separate location at which the contract is being performed; or
 - (iii) A separate and complete major industrial operation connected with performing this contract.
 - (2) The Government shall deliver to the Contractor, for use in connection with and under the terms of this contract, the Government-furnished property described in the Schedule or specifications, together with such related data and information as the Contractor may request and as may be reasonably required for the intended use of the property (hereinafter referred to as "Government-furnished property").
 - (3) The delivery or performance dates for this contract are based upon the expectation that Government-furnished property suitable for use will be delivered to the Contractor at the times stated in the Schedule or, if not so stated, in sufficient time to enable the Contractor to meet the contract's delivery or performance dates.
 - (4) If Government-furnished property is received by the Contractor in a condition not suitable for the intended use, the Contractor shall, upon receipt, notify the Contracting Officer, detailing the facts, and, as directed by the Contracting Officer and at Government expense, either effect repairs or modification or return or otherwise dispose of the property. After completing the directed action and upon written request of the Contractor, the Contracting Officer shall make an equitable adjustment as provided in paragraph (h) of this clause.
 - (5) If Government-furnished property is not delivered to the Contractor by the required time or times, the Contracting Officer shall, upon the Contractor's timely written request, make a determination of the delay, if any, caused the Contractor and shall make an equitable adjustment in accordance with paragraph (h) of this clause.
- (b) Changes in Government-furnished property.
- (1) The Contracting Officer may, by written notice, (i) decrease the Government-furnished property provided or to be provided under this contract or (ii) substitute other Government-furnished property for the property to be provided by the Government or to be acquired by the Contractor for the Government under this contract. The Contractor shall promptly take such action as the Contracting Officer may direct regarding the removal, shipment, or disposal of the property covered by this notice.
 - (2) Upon the Contractor's written request, the Contracting Officer shall make an equitable adjustment to the contract in accordance with paragraph (h) of this clause, if the Government has agreed in the Schedule to make such property available for performing this contract and there is any -
 - (i) Decrease or substitution in this property pursuant to subparagraph (b)(1) above; or
 - (ii) Withdrawal of authority to use property, if provided under any other contract or lease.
- (c) Title.
- (1) The Government shall retain title to all Government-furnished property.
 - (2) Title to all property purchased by the Contractor for which the Contractor is entitled to be reimbursed as a direct item of cost under this contract shall pass to and vest in the Government upon the vendor's delivery of such property.
 - (3) Title to all other property, the cost of which is reimbursable to the Contractor, shall pass to and vest in the Government upon -
 - (i) Issuance of the property for use in contract performance;

- (ii) Commencement of processing of the property for use in contract performance; or
 - (iii) Reimbursement of the cost of the property by the Government, whichever occurs first.
- (4) All Government-furnished property and all property acquired by the Contractor, title to which vests in the Government under this paragraph (collectively referred to as "Government property"), are subject to the provisions of this clause. Title to Government property shall not be affected by its incorporation into or attachment to any property not owned by the Government, nor shall Government property become a fixture or lose its identity as personal property by being attached to any real property.
- (d) Use of Government property. The Government property shall be used only for performing this contract, unless otherwise provided in this contract or approved by the Contracting Officer.
- (e) Property administration.
- (1) The Contractor shall be responsible and accountable for all Government property provided under the contract and shall comply with Federal Acquisition Regulation (FAR) Subpart 45.5 and DOE Acquisition Regulation Subpart 945.5, as in effect on the date of this contract.
 - (2) The Contractor shall establish and maintain a program for the use, maintenance, repair, protection, and preservation of Government property in accordance with sound business practice and the applicable provisions of FAR Subpart 45.5 and DOE Acquisition Regulation Subpart 945.5.
 - (3) If damage occurs to Government property, the risk of which has been assumed by the Government under this contract, the Government shall replace the items or the Contractor shall make such repairs as the Government directs. However, if the Contractor cannot effect such repairs within the time required, the Contractor shall dispose of the property as directed by the Contracting Officer. When any property for which the Government is responsible is replaced or repaired, the Contracting Officer shall make an equitable adjustment in accordance with paragraph (h) of this clause.
- (f) Access. The Government and all its designees shall have access at all reasonable times to the premises in which any Government property is located for the purpose of inspecting the Government property.
- (g) Limited risk of loss.
- (1) The Contractor shall not be liable for loss or destruction of, or damage to, the Government property provided under this contract or for expenses incidental to such loss, destruction, or damage, except as provided in subparagraphs (2) and (3) below.
 - (2) The Contractor shall be responsible for loss or destruction of, or damage to, the Government property provided under this contract (including expenses incidental to such loss, destruction, or damage) -
 - (i) That results from a risk expressly required to be insured under this contract, but only to the extent of the insurance required to be purchased and maintained or to the extent of insurance actually purchased and maintained, whichever is greater;
 - (ii) That results from a risk that is in fact covered by insurance or for which the Contractor is otherwise reimbursed, but only to the extent of such insurance or reimbursement;
 - (iii) For which the Contractor is otherwise responsible under the express terms of this contract;
 - (iv) That results from willful misconduct or lack of good faith on the part of the Contractor's managerial personnel; or

- (v) That results from a failure on the part of the Contractor, due to willful misconduct or lack of good faith on the part of the Contractor's managerial personnel, to establish and administer a program or system for the control, use, protection, preservation, maintenance, and repair of Government property as required by paragraph (e) of this clause.
- (3)(i) If the Contractor fails to act as provided by subdivision (g)(2)(v) above, after being notified (by certified mail addressed to one of the Contractor's managerial personnel) of the Government's disapproval, withdrawal of approval, or nonacceptance of the system or program, it shall be conclusively presumed that such failure was due to willful misconduct or lack of good faith on the part of the Contractor's managerial personnel.
- (ii) In such event, any loss or destruction of, or damage to, the Government property shall be presumed to have resulted from such failure unless the Contractor can establish by clear and convincing evidence that such loss, destruction, or damage -
 - (A) Did not result from the Contractor's failure to maintain an approved program or system; or
 - (B) Occurred while an approved program or system was maintained by the Contractor.
- (4) If the Contractor transfers Government property to the possession and control of a subcontractor, the transfer shall not affect the liability of the Contractor for loss or destruction of, or damage to, the property as set forth above. However, the Contractor shall require the subcontractor to assume the risk of, and be responsible for, any loss or destruction of, or damage to, the property while in the subcontractor's possession or control, except to the extent that the subcontract, with the advance approval of the Contracting Officer, relieves the subcontractor from such liability. In the absence of such approval, the subcontract shall contain appropriate provisions requiring the return of all Government property in as good condition as when received, except for reasonable wear and tear or for its use in accordance with the provisions of the prime contract.
- (5) Upon loss or destruction of, or damage to, Government property provided under this contract, the Contractor shall so notify the Contracting Officer and shall communicate with the loss and salvage organization, if any, designated by the Contracting Officer. With the assistance of any such organization, the Contractor shall take all reasonable action to protect the Government property from further damage, separate the damaged and undamaged Government property, put all the affected Government property in the best possible order, and furnish to the Contracting Officer a statement of -
 - (i) The lost, destroyed, or damaged Government property;
 - (ii) The time and origin of the loss, destruction, or damage;
 - (iii) All known interests in commingled property of which the Government property is a part; and
 - (iv) The insurance, if any, covering any part of or interest in such commingled property.
- (6) The Contractor shall repair, renovate, and take such other action with respect to damaged Government property as the Contracting Officer directs. If the Government property is destroyed or damaged beyond practical repair, or is damaged and so commingled or combined with property of others (including the Contractor's) that separation is impractical, the Contractor may, with the approval of and subject to any conditions imposed by the Contracting Officer, sell such property for the account of the Government. Such sales may be made in order to minimize the loss to the Government, to permit the resumption of business, or to accomplish a similar purpose. The Contractor shall be entitled to an equitable adjustment in the contract price for the expenditures made in performing the obligations under this

subparagraph (g)(6) in accordance with paragraph (h) of this clause. However, the Government may directly reimburse the loss and salvage organization for any of their charges. The Contracting Officer shall give due regard to the Contractor's liability under this paragraph (g) when making any such equitable adjustment.

- (7) The Contractor shall not be reimbursed for, and shall not include as an item of overhead, the cost of insurance or of any reserve covering risk of loss or destruction of, or damage to, Government property, except to the extent that the Government may have expressly required the Contractor to carry such insurance under another provision of this contract.
 - (8) In the event the Contractor is reimbursed or otherwise compensated for any loss or destruction of, or damage to, Government property, the Contractor shall use the proceeds to repair, renovate, or replace the lost, destroyed, or damaged Government property or shall otherwise credit the proceeds to, or equitably reimburse, the Government, as directed by the Contracting Officer.
 - (9) The Contractor shall do nothing to prejudice the Government's rights to recover against third parties for any loss or destruction of, or damage to, Government property. Upon the request of the Contracting Officer, the Contractor shall, at the Government's expense, furnish to the Government all reasonable assistance and cooperation (including the prosecution of suit and the execution of instruments of assignment in favor of the Government) in obtaining recovery. In addition, where a subcontractor has not been relieved from liability for any loss or destruction of, or damage to, Government property, the Contractor shall enforce for the benefit of the Government the liability of the subcontractor for such loss, destruction, or damage.
- (h) Equitable adjustment. When this clause specifies an equitable adjustment, it shall be made to any affected contract provision in accordance with the procedures of the Changes clause. When appropriate, the Contracting Officer may initiate an equitable adjustment in favor of the Government. The right to an equitable adjustment shall be the Contractor's exclusive remedy. The Government shall not be liable to suit for breach of contract for -
- (1) Any delay in delivery of Government-furnished property;
 - (2) Delivery of Government-furnished property in a condition not suitable for its intended use;
 - (3) A decrease in or substitution of Government-furnished property; or
 - (4) Failure to repair or replace Government property for which the Government is responsible.
- (i) Final accounting and disposition of Government property. Upon completing this contract, or at such earlier dates as may be fixed by the Contracting Officer, the Contractor shall submit, in a form acceptable to the Contracting Officer, inventory schedules covering all items of Government property not consumed in performing this contract or delivered to the Government. The Contractor shall prepare for shipment, deliver f.o.b. origin, or dispose of the Government property as may be directed or authorized by the Contracting Officer. The net proceeds of any such disposal shall be credited to the cost of the work covered by this contract or paid to the Government as directed by the Contracting Officer. The foregoing provisions shall apply to scrap from Government property; provided, however, that the Contracting Officer may authorize or direct the Contractor to omit from such inventory schedules any scrap consisting of faulty castings or forgings or of cutting and processing waste, such as chips, cuttings, borings, turnings, short ends, circles, trimmings, clippings, and remnants, and to dispose of such scrap in accordance with the Contractor's normal practice and account for it as a part of general overhead or other reimbursable costs in accordance with the Contractor's established accounting procedures.
- (j) Abandonment and restoration of Contractor premises. Unless otherwise provided herein, the Government -
- (1) May abandon any Government property in place, at which time all obligations of the Government regarding such abandoned property shall cease; and

- (2) Has no obligation to restore or rehabilitate the Contractor's premises under any circumstances (e.g., abandonment, disposition upon completion of need, or contract completion). However, if the Government-furnished property (listed in the Schedule or specifications) is withdrawn or is unsuitable for the intended use, or if other Government property is substituted, then the equitable adjustment under paragraph (h) of this clause may properly include restoration or rehabilitation costs.
- (k) Communications. All communications under this clause shall be in writing.
- (l) Overseas contracts. If this contract is to be performed outside the United States of America, its territories, or possessions, the words "Government" and "Government-furnished" (wherever they appear in this clause) shall be construed as "United States Government" and "United States Government-furnished," respectively.

I.74 52.246-25 LIMITATION OF LIABILITY—SERVICES. (FEB 1997)

- (a) Except as provided in paragraphs (b) and (c) below, and except to the extent that the Contractor is expressly responsible under this contract for deficiencies in the services required to be performed under it (including any materials furnished in conjunction with those services), the Contractor shall not be liable for loss of or damage to property of the Government that—
 - (1) Occurs after Government acceptance of services performed under this contract; and
 - (2) Results from any defects or deficiencies in the services performed or materials furnished.
- (b) The limitation of liability under paragraph (a) above shall not apply when a defect or deficiency in, or the Government's acceptance of, services performed or materials furnished results from willful misconduct or lack of good faith on the part of any of the Contractor's managerial personnel. The term "Contractor's managerial personnel," as used in this clause, means the Contractor's directors, officers, and any of the Contractor's managers, superintendents, or equivalent representatives who have supervision or direction of—
 - (1) All or substantially all of the Contractor's business;
 - (2) All or substantially all of the Contractor's operations at any one plant, laboratory, or separate location at which the contract is being performed; or
 - (3) A separate and complete major industrial operation connected with the performance of this contract.
- (c) If the Contractor carries insurance, or has established a reserve for self-insurance, covering liability for loss or damage suffered by the Government through the Contractor's performance of services or furnishing of materials under this contract, the Contractor shall be liable to the Government, to the extent of such insurance or reserve, for loss of or damage to property of the Government occurring after Government acceptance of, and resulting from any defects and deficiencies in, services performed or materials furnished under this contract.

I.75 52.247-63 PREFERENCE FOR U.S.-FLAG AIR CARRIERS. (JAN 1997)

- (a) "International air transportation," as used in this clause, means transportation by air between a place in the United States and a place outside the United States or between two places both of which are outside the United States.

"United States," as used in this clause, means the 50 States, the District of Columbia, the Commonwealth of Puerto Rico, and possessions of the United States.

"U.S.-flag air carrier," as used in this clause, means an air carrier holding a certificate under 49 U.S.C. Chapter 411.

- (b) Section 5 of the International Air Transportation Fair Competitive Practices Act of 1974 (49 U.S.C. 40118) (Fly America Act) requires that all Federal agencies and Government contractors and subcontractors use U.S.-flag air carriers for U.S. Government-financed international air transportation of personnel (and their personal effects) or property, to the extent that service by those carriers is available. It requires the Comptroller General of the United States, in the absence of satisfactory proof of the necessity for foreign-flag air transportation, to disallow expenditures from funds, appropriated or otherwise established for the account of the United States, for international air transportation secured aboard a foreign-flag air carrier if a U.S.-flag air carrier is available to provide such services.
- (c) The Contractor agrees, in performing work under this contract, to use U.S.-flag air carriers for international air transportation of personnel (and their personal effects) or property to the extent that service by those carriers is available.
- (d) In the event that the Contractor selects a carrier other than a U.S.-flag air carrier for international air transportation, the Contractor shall include a statement on vouchers involving such transportation essentially as follows:

STATEMENT OF UNAVAILABILITY OF U.S.-FLAG AIR CARRIERS

International air transportation of persons (and their personal effects) or property by U.S.-flag air carrier was not available or it was necessary to use foreign-flag air carrier service for the following reasons (see section 47.403 of the Federal Acquisition Regulation): (State reasons):

[]
(End of statement)

- (e) The Contractor shall include the substance of this clause, including this paragraph (e), in each subcontract or purchase under this contract that may involve international air transportation.
- I.76 52.247-64 PREFERENCE FOR PRIVATELY OWNED U.S.-FLAG COMMERCIAL VESSELS. (JUN 1997)**
- (a) The Cargo Preference Act of 1954 (46 U.S.C. 1241(b)) requires that Federal departments and agencies shall transport in privately owned U.S.-flag commercial vessels at least 50 percent of the gross tonnage of equipment, materials, or commodities that may be transported in ocean vessels (computed separately for dry bulk carriers, dry cargo liners, and tankers). Such transportation shall be accomplished when any equipment, materials, or commodities, located within or outside the United States, that may be transported by ocean vessel are—
 - (1) Acquired for a U.S. Government agency account;
 - (2) Furnished to, or for the account of, any foreign nation without provision for reimbursement;
 - (3) Furnished for the account of a foreign nation in connection with which the United States advances funds or credits, or guarantees the convertibility of foreign currencies; or
 - (4) Acquired with advance of funds, loans, or guaranties made by or on behalf of the United States.
 - (b) The Contractor shall use privately owned U.S.-flag commercial vessels to ship at least 50 percent of the gross tonnage involved under this contract (computed separately for dry bulk carriers, dry cargo liners, and tankers) whenever shipping any equipment, materials, or commodities under the conditions set forth in paragraph (a) above, to the extent that such vessels are available at rates that are fair and reasonable for privately owned U.S.-flag commercial vessels.
 - (c)(1) The Contractor shall submit one legible copy of a rated on-board ocean bill of lading for each shipment to both—
 - (i) The Contracting Officer, and

(ii) The:

Office of Cargo Preference
Maritime Administration (MAR-590)
400 Seventh Street, SW
Washington, DC 20590

Subcontractor bills of lading shall be submitted through the Prime Contractor.

- (2) The Contractor shall furnish these bill of lading copies (i) within 20 working days of the date of loading for shipments originating in the United States, or (ii) within 30 working days for shipments originating outside the United States. Each bill of lading copy shall contain the following information:
- (A) Sponsoring U.S. Government agency.
 - (B) Name of vessel.
 - (C) Vessel flag of registry.
 - (D) Date of loading.
 - (E) Port of loading.
 - (F) Port of final discharge.
 - (G) Description of commodity.
 - (H) Gross weight in pounds and cubic feet if available.
 - (I) Total ocean freight revenue in U.S. dollars.
- (d) Except for contracts at or below the simplified acquisition threshold, the Contractor shall insert the substance of this clause, including this paragraph (d), in all subcontracts or purchase orders under this contract.
- (e) The requirement in paragraph (a) does not apply to—
- (1) Contracts at or below the simplified acquisition threshold;
 - (2) Cargoes carried in vessels of the Panama Canal Commission or as required or authorized by law or treaty;
 - (3) Ocean transportation between foreign countries of supplies purchased with foreign currencies made available, or derived from funds that are made available, under the Foreign Assistance Act of 1961 (22 U.S.C. 2353); and
 - (4) Shipments of classified supplies when the classification prohibits the use of non-Government vessels.
- (f) Guidance regarding fair and reasonable rates for privately owned U.S.-flag commercial vessels may be obtained from the:

Office of Costs and Rates
Maritime Administration
400 Seventh Street, SW
Washington, DC 20590
Phone: 202-366-4610.

I.77 52.249-4 TERMINATION FOR CONVENIENCE OF THE GOVERNMENT (SERVICES)(SHORT FORM)

The Contracting Officer, by written notice, may terminate this contract, in whole or in part, when it is in the Government's interest. If this contract is terminated, the Government shall be liable only for payment under the payment provisions of this contract for services rendered before the effective date of termination.

I.78 52.249-8 DEFAULT (FIXED-PRICE SUPPLY AND SERVICE)(APR 1984)

- (a)(1) The Government may, subject to paragraphs (c) and (d) of this clause, by written notice of default to the Contractor, terminate this contract in whole or in part if the Contractor fails to—
 - (i) Deliver the supplies or to perform the services within the time specified in this contract or any extension;
 - (ii) Make progress, so as to endanger performance of this contract (but see subparagraph (a)(2) of this clause); or
 - (iii) Perform any of the other provisions of this contract (but see subparagraph (a)(2) of this clause).
- (2) The Government's right to terminate this contract under subdivisions (a)(1)(ii) and (1)(iii) of this clause, may be exercised if the Contractor does not cure such failure within 10 days (or more if authorized in writing by the Contracting Officer) after receipt of the notice from the Contracting Officer specifying the failure.
- (b) If the Government terminates this contract in whole or in part, it may acquire, under the terms and in the manner the Contracting Officer considers appropriate, supplies or services similar to those terminated, and the Contractor will be liable to the Government for any excess costs for those supplies or services. However, the Contractor shall continue the work not terminated.
- (c) Except for defaults of subcontractors at any tier, the Contractor shall not be liable for any excess costs if the failure to perform the contract arises from causes beyond the control and without the fault or negligence of the Contractor. Examples of such causes include (1) acts of God or of the public enemy, (2) acts of the Government in either its sovereign or contractual capacity, (3) fires, (4) floods, (5) epidemics, (6) quarantine restrictions, (7) strikes, (8) freight embargoes, and (9) unusually severe weather. In each instance the failure to perform must be beyond the control and without the fault or negligence of the Contractor.
- (d) If the failure to perform is caused by the default of a subcontractor at any tier, and if the cause of the default is beyond the control of both the Contractor and subcontractor, and without the fault or negligence of either, the Contractor shall not be liable for any excess costs for failure to perform, unless the subcontracted supplies or services were obtainable from other sources in sufficient time for the Contractor to meet the required delivery schedule.
- (e) If this contract is terminated for default, the Government may require the Contractor to transfer title and deliver to the Government, as directed by the Contracting Officer, any (1) completed supplies, and (2) partially completed supplies and materials, parts, tools, dies, jigs, fixtures, plans, drawings, information, and contract rights (collectively referred to as "manufacturing materials" in this clause) that the Contractor has specifically produced or acquired for the terminated portion of this contract. Upon direction of the Contracting Officer, the Contractor shall also protect and preserve property in its possession in which the Government has an interest.
- (f) The Government shall pay contract price for completed supplies delivered and accepted. The Contractor and Contracting Officer shall agree on the amount of payment for manufacturing materials delivered and accepted and for the protection and preservation of the property. Failure to agree will be a dispute under the Disputes clause. The Government may withhold from these amounts any sum the Contracting Officer determines to be necessary to protect the Government against loss because of outstanding liens or claims of former lien holders.

- (g) If, after termination, it is determined that the Contractor was not in default, or that the default was excusable, the rights and obligations of the parties shall be the same as if the termination had been issued for the convenience of the Government.
- (h) The rights and remedies of the Government in this clause are in addition to any other rights and remedies provided by law or under this contract.

I.79 52.249-14 EXCUSABLE DELAYS. (APR 1984)

- (a) Except for defaults of subcontractors at any tier, the Contractor shall not be in default because of any failure to perform this contract under its terms if the failure arises from causes beyond the control and without the fault or negligence of the Contractor. Examples of these causes are (1) acts of God or of the public enemy, (2) acts of the Government in either its sovereign or contractual capacity, (3) fires, (4) floods, (5) epidemics, (6) quarantine restrictions, (7) strikes, (8) freight embargoes, and (9) unusually severe weather. In each instance, the failure to perform must be beyond the control and without the fault or negligence of the Contractor. "Default" includes failure to make progress in the work so as to endanger performance.
- (b) If the failure to perform is caused by the failure of a subcontractor at any tier to perform or make progress, and if the cause of the failure was beyond the control of both the Contractor and subcontractor, and without the fault or negligence of either, the Contractor shall not be deemed to be in default, unless—
 - (1) The subcontracted supplies or services were obtainable from other sources;
 - (2) The Contracting Officer ordered the Contractor in writing to purchase these supplies or services from the other source; and
 - (3) The Contractor failed to comply reasonably with this order.
- (c) Upon request of the Contractor, the Contracting Officer shall ascertain the facts and extent of the failure. If the Contracting Officer determines that any failure to perform results from one or more of the causes above, the delivery schedule shall be revised, subject to the rights of the Government under the termination clause of this contract.

I.80 52.251-1 GOVERNMENT SUPPLY SOURCES. (APR 1984)

The Contracting Officer may issue the Contractor an authorization to use Government supply sources in the performance of this contract. Title to all property acquired by the Contractor under such an authorization shall vest in the Government unless otherwise specified in the contract. Such property shall not be considered to be "Government-furnished property," as distinguished from "Government property." The provisions of the clause entitled "Government Property," except its paragraphs (a) and (b), shall apply to all property acquired under such authorization.

I.81 52.251-2 INTERAGENCY FLEET MANAGEMENT SYSTEM VEHICLES AND RELATED SERVICES. (JAN 1991)

The Contracting Officer may issue the Contractor an authorization to obtain interagency fleet management system (IFMS) vehicles and related services for use in the performance of this contract. The use, service, and maintenance of interagency fleet management system vehicles and the use of related services by the Contractor shall be in accordance with 41 CFR 101-39 and 41 CFR 101-38.301-1.

I.82 52.252-2 CLAUSES INCORPORATED BY REFERENCE. (FEB 1998)

This contract incorporates one or more clauses by reference, with the same force and effect as if they were given in full text. Upon request, the Contracting Officer will make their full text available. Also, the full text of a clause may be accessed electronically at this/these address(es):

[Insert one or more Internet addresses]

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I.83 52.253-1 COMPUTER GENERATED FORMS. (JAN 1991)

- (a) Any data required to be submitted on a Standard or Optional Form prescribed by the Federal Acquisition Regulation (FAR) may be submitted on a computer generated version of the form, provided there is no change to the name, content, or sequence of the data elements on the form, and provided the form carries the Standard or Optional Form number and edition date.
- (b) Unless prohibited by agency regulations, any data required to be submitted on an agency unique form prescribed by an agency supplement to the FAR may be submitted on a computer generated version of the form provided there is no change to the name, content, or sequence of the data elements on the form and provided the form carries the agency form number and edition date.
- (c) If the Contractor submits a computer generated version of a form that is different than the required form, then the rights and obligations of the parties will be determined based on the content of the required form.

I.84 952.209-72 ORGANIZATIONAL CONFLICTS OF INTEREST. (JUN 1997)

- (a) Purpose. The purpose of this clause is to ensure that the contractor (1) is not biased because of its financial, contractual, organizational, or other interests which relate to the work under this contract, and (2) does not obtain any unfair competitive advantage over other parties by virtue of its performance of this contract.
- (b) Scope. The restrictions described herein shall apply to performance or participation by the contractor and any of its affiliates or their successors in interest (hereinafter collectively referred to as "contractor") in the activities covered by this clause as a prime contractor, subcontractor, cosponsor, joint venturer, consultant, or in any similar capacity. For the purpose of this clause, affiliation occurs when a business concern is controlled by or has the power to control another or when a third party has the power to control both.

(1) Use of Contractor's Work Product.

- (i) The contractor shall be ineligible to participate in any capacity in Department contracts, subcontracts, or proposals therefor (solicited and unsolicited) which stem directly from the contractor's performance of work under this contract for a period of (Contracting Officer see DEAR 909.507-2 and enter specific term) two (2) years after the completion of this contract. Furthermore, unless so directed in writing by the contracting officer, the Contractor shall not perform any advisory and assistance services work under this contract on any of its products or services or the products or services of another firm if the contractor is or has been substantially involved in their development or marketing. Nothing in this subparagraph shall preclude the contractor from competing for follow-on contracts for advisory and assistance services.
- (ii) If, under this contract, the contractor prepares a complete or essentially complete statement of work or specifications to be used in competitive acquisitions, the contractor shall be ineligible to perform or participate in any capacity in any contractual effort which is based on such statement of work or specifications. The contractor shall not incorporate its products or services in such statement of work or specifications unless so directed in writing by the contracting officer, in which case the restriction in this subparagraph shall not apply.
- (iii) Nothing in this paragraph shall preclude the contractor from offering or selling its standard and commercial items to the Government.

(2) Access to and use of information.

- (i) If the contractor, in the performance of this contract, obtains access to information, such as Department plans, policies, reports, studies, financial plans, internal data protected by the Privacy Act of 1974 (5 U.S.C. 552a), or data which has not been

released or otherwise made available to the public, the contractor agrees that without prior written approval of the contracting officer it shall not:

- (A) use such information for any private purpose unless the information has been released or otherwise made available to the public;
 - (B) compete for work for the Department based on such information for a period of six (6) months after either the completion of this contract or until such information is released or otherwise made available to the public, whichever is first;
 - (C) submit an unsolicited proposal to the Government which is based on such information until one year after such information is released or otherwise made available to the public; and
 - (D) release such information unless such information has previously been released or otherwise made available to the public by the Department.
- (ii) In addition, the contractor agrees that to the extent it receives or is given access to proprietary data, data protected by the Privacy Act of 1974 (5 U.S.C. 552a), or other confidential or privileged technical, business, or financial information under this contract, it shall treat such information in accordance with any restrictions imposed on such information.
 - (iii) The contractor may use technical data it first produces under this contract for its private purposes consistent with paragraphs (b)(2)(i) (A) and (D) of this clause and the patent, rights in data, and security provisions of this contract.

(c) Disclosure after award.

- (1) The contractor agrees that, if changes, including additions, to the facts disclosed by it prior to award of this contract, occur during the performance of this contract, it shall make an immediate and full disclosure of such changes in writing to the contracting officer. Such disclosure may include a description of any action which the contractor has taken or proposes to take to avoid, neutralize, or mitigate any resulting conflict of interest. The Department may, however, terminate the contract for convenience if it deems such termination to be in the best interest of the Government.
 - (2) In the event that the contractor was aware of facts required to be disclosed or the existence of an actual or potential organizational conflict of interest and did not disclose such facts or such conflict of interest to the contracting officer, DOE may terminate this contract for default.
- (d) Remedies. For breach of any of the above restrictions or for nondisclosure or misrepresentation of any facts required to be disclosed concerning this contract, including the existence of an actual or potential organizational conflict of interest at the time of or after award, the Government may terminate the contract for default, disqualify the contractor from subsequent related contractual efforts, and pursue such other remedies as may be permitted by law or this contract.
- (e) Waiver. Requests for waiver under this clause shall be directed in writing to the contracting officer and shall include a full description of the requested waiver and the reasons in support thereof. If it is determined to be in the best interests of the Government, the contracting officer may grant such a waiver in writing.

I.85 952.247-70 FOREIGN TRAVEL. (FEB 1997)

- (a) Foreign travel, when charged directly, shall be subject to the prior approval of the contracting officer for each separate trip regardless of whether funds for such travel are contained in an approved budget. Foreign travel is defined as any travel outside of Canada, Mexico, and the United States and its territories and possessions.
- (b) Request for approval shall be submitted at least 45 days prior to the planned departure date, be on a Request for Approval of Foreign Travel form, and when applicable, include a notification of proposed soviet-bloc travel.

I.86 952.251-70 CONTRACTOR EMPLOYEE TRAVEL DISCOUNTS. (JUN 1995)

Consistent with contract-authorized travel requirements, contractor employees shall make use of the travel discounts offered to Federal travelers, through use of contracted airlines discount air fares, hotels and motels lodging rates and car rental companies, when use of such discounts would result in lower overall trip costs and the discounted services are reasonably available to contractor employees performing official Government contract business. Vendors providing these services may require that the contractor employee traveling on Government business be furnished with a letter of identification signed by the authorized contracting officer.

- (a) Contracted airlines. Airlines participating in travel discounts are listed in the Federal Travel Directory (FTD), published monthly by the General Services Administration (GSA). Regulations governing the use of contracted airlines are contained in the Federal Travel Regulation (FTR), 41 CFR Part 301-15, Travel Management Programs. It stipulates that cost-reimbursable contractor employees may obtain discount air fares by use of a Government Transportation Request (GTR), Standard Form 1169, cash or personal credit cards. When the GTR is used, contracting officers may issue a blanket GTR for a period of not less than two weeks nor more than one month. In unusual circumstances, such as prolonged or international travel, the contracting officer may extend the period for which a blanket GTR is effective to a maximum of three months. Contractors will ensure that their employees traveling under GTR provide the GTR number to the contracted airlines for entry on individual tickets and on month-end billings to the contractor.
- (b) Hotels/motels. Participating hotels and motels which extend discounts are listed in the FTD, which shows rates, facilities, and identifies by code those which offer reduced rates to cost-reimbursable contractor employees while traveling on official contract business.
- (c) Car rentals. The Military Traffic Management Command (MTMC) Department of Defense, negotiates rate agreements with car rental companies for special flat rates and unlimited mileage. Participating car rental companies which offer these terms to cost-reimbursable contractor employees while traveling on official contract business are listed in the FTD.
- (d) Procedures for obtaining service.
 - (1) Identification and method of payment requirements for participating Federal contracted airlines are listed in the FTR. Travel discount air fares may be ordered by the issuance of a GTR either directly to the contractor, or to a Scheduled Airline Travel Office (SATO) or Federal Travel Management Center (FTMC), provided the letter of identification signed by the cognizant contracting officer accompanies the order. In appropriate instances, such as geographical proximity, contractors may obtain discount air fares through a DOE office of a cooperating local travel agency when neither a SATO or FTMC is available. Some airlines allow the purchase of discounted air fares with cash or credit card.
 - (2) In the case of hotel and motel accommodations, reservations may be made by the contractor employee directly with the hotel or motel but the employee must display, on arrival, the letter of identification and any other identification required by the hotel or motel proprietorship.
 - (3) For car rentals, generally the same procedures as in (d)(2) above will be followed in arranging reservations and obtaining discounts.

- (e) Standard letter of identification. Contractors shall prepare for the authorizing contracting officer a letter of identification based on the following format:

Format for Government Contractors to Qualify for Travel Discounts (To be typed on agency official letterhead)

To: [(Source of ticketing, accommodations or rental)]

Subject: Official Travel of Government Contractor

[Full name of traveler], bearer of this letter, is an employee of [company name] which is under contract to this agency under the Government contract [contract number]. During the period of the contract [give dates], the employee is eligible and authorized to use available discount rates for contract-related travel in accordance with your contract and/or agreement with the Federal Government.

[Signature, title and telephone number of the contracting officer]

I.87 970.5204-59 WHISTLEBLOWER PROTECTION FOR CONTRACTOR EMPLOYEES. (JAN 1993)

- (a) The contractor shall comply with the requirements of the "DOE Contractor Employee Protection Program" at 10 CFR Part 708.
- (b) The Contractor shall insert or have inserted the substance of this clause including this paragraph (b), in subcontracts, at all tiers, with respect to work performed on-site at DOE-owned or -leased facilities, as provided for at 10 CFR Part 708.

I.88 52.252-5 AUTHORIZED DEVIATIONS IN PROVISIONS (APR 1994)

- (a) The use in this solicitation of any Federal Acquisition Regulation (48 CFR Chapter 1) provision with an authorized deviation is indicated by the addition of "(DEVIATION)" after the date of the provision.
- (b) The use in this solicitation of any Department of Energy Acquisition Regulation (48 CFR Chapter 9) provision with an authorized deviation is indicated by the addition of "(DEVIATION)" after the name of the regulation.

I.89 52.219-70XX SECTION 8(a) DIRECT AWARD (JUN 1998)

- (a) This contract is issued as a direct award between the contracting activity and the 8(a) contractor pursuant to a Memorandum of Understanding between the Small Business Administration (SBA) and the Department of Energy (DOE). SBA retains responsibility for 8(a) certification, 8(a) eligibility determinations and related issues, and providing counseling and assistance to the 8(a) contractor under the 8(a) program. The cognizant SBA district office is:

{To be completed by Contracting Officer at time of award}

- (b) DOE is responsible for administering the contract and taking any action on behalf of the Government under the terms and conditions of the contract. However, DOE shall give advance notice to the SBA before it issues a final notice terminating performance, either in whole or in part, under the contract. DOE shall also coordinate with SBA prior to processing any novation agreement. DOE may assign contract administration functions to a contract administration office.

(c) The contractor agrees:

(1) to notify the Contracting Officer, simultaneously with its notification to SBA (as required by SBA's 8(a) regulations), when the owner or owners upon whom 8(a) eligibility is based plan to relinquish ownership or control of the concern. Consistent with 15 U.S.C. 637(a)(21), transfer or ownership or control shall result in termination of the contract for convenience, unless SBA waives the requirement for termination prior to the actual relinquishing of ownership or control.

(2) to adhere to the requirements of 52.219-14, Limitations on Subcontracting.

I.90 52.222-43 FAIR LABOR STANDARDS ACT AND SERVICE CONTRACT ACT-PRICE ADJUSTMENT (MULTIPLE YEAR AND OPTION CONTRACTS)(MAY 1989)

(a) This clause applies to both contracts subject to area prevailing wage determinations and contracts subject to collective bargaining agreements.

(b) The Contractor warrants that the prices in this contract do not include any allowance for any contingency to cover increased costs for which adjustment is provided under this clause.

(c) The wage determination, issued under the Service Contract Act of 1965, as amended, (41 U.S.C. 351, ET SEQ.), by the Administrator, Wage and Hour Division, Employment Standards Administration, U. S. Department of Labor, current on the anniversary date of a multiple year contract or the beginning of each renewal option period, shall apply to this contract. If no such determination has been made applicable to this contract, then the Federal minimum wage as established by Section 6(a)(91) of the Fair Labor Standards Act of 1938, as amended, (29 U.S.C. 206) current on the anniversary date of a multiple year contract or the beginning of each renewal option period, shall apply to this contract.

(d) The contract price or contract unit price labor rates will be adjusted to reflect the Contractor's actual increase or decrease in applicable wages and fringe benefits to the extent that the increase is made to comply with or the decrease is voluntarily made by the Contractor as a result of:

(1) The Department of Labor wage determination applicable on the anniversary date of the multiple year contract, or at the beginning of the renewal option period. For example, the prior year wage determination required a minimum wage rate of \$4.00 per hour. The Contractor chose to pay \$4.10. The new wage determination increases the minimum rate to \$4.50 per hour. Even if the Contractor voluntarily increase rate to \$4.75 per hour, the allowable price adjustment is \$.40 per hour;

(2) An increased or decreased wage determination otherwise applied to the contract by operation of law; or

(3) An amendment to the Fair labor Standards Act of 1938 that is enacted after award of this contract, affects the minimum wage, and becomes applicable to this contract under law.

(e) Any adjustment will be limited to increases or decreases in wages and fringe benefits as described in paragraph (c) of this clause, and the accompanying increases or decreases in social security and unemployment taxes and workers' compensation insurance, but shall not otherwise include any amount for general and administrative costs, overhead, or profit.

(f) The Contractor shall notify the Contracting Officer of any increase claimed under this clause within 30 days after receiving a new wage determination unless this notification period is extended in writing by the Contracting Officer. The Contractor shall promptly notify the Contracting Officer. The Contractor shall promptly notify the Contracting Officer of any decrease under this clause, but nothing in the clause shall preclude the

Government from asserting a claim within the period permitted by law. The notice shall contain a statement of the amount claimed and any relevant supporting data, including payroll records, that the Contracting Officer may reasonably require. Upon agreement of the parties, the contract price or contract until price labor shall be modified in writing. The Contractor shall continue performance pending agreement on or determination of any such adjustment and its effective date.

(g) The Contracting Officer or an authorized representative shall have access to and the right to examine any directly pertinent books, documents, papers and records of the Contractor until the expiration of 3 years after final payment under the contract.

SECTION J - LIST OF ATTACHMENTS

J.1 SECTION J – LIST OF ATTACHMENTS

<u>Attachment</u>	<u>Description</u>
A	Statement of Work
B	Reporting Requirements Checklist
C	Schedule of Costs for Tasks in Basic Contract
D	Deleted
E	Exempt Position Qualifications
F	Deleted
G	Wage Rate Determinations
H	Deleted
I	Property
J	Computing Environment
K	Enterprise Architecture Methodology
L	Incentive Plan

Statement of Work - Comprehensive Information Processing Services (CHIPS)
Solicitation DE-RP26-99FT40139

1. GENERAL

A. GENERAL

The Contractor, shall provide the necessary personnel to perform all of the CHIPS described in this Statement of Work. These services include but are not necessarily limited to the following functional areas: information technology resources (minicomputers, desktop computers, workstations, servers), communications (data & telecommunications, satellite, radio, fax, video, voice mail, LAN/WAN); Information Center/Info Desk, information technology maintenance, Internet/intranet access, information technology analysis/reviews, information technology training, software distribution/management, application software development and maintenance, information technology reporting; computer security, data base management and administration, and information technology resources planning.

B. SITE INFORMATION

The primary services for this contract will be provided at the Federal Energy Technology Center's (FETC) Pittsburgh, PA and Morgantown, WV sites. All services and components must be integrated to function as a single entity. Approximately 550 government employees and 550 contractor employees are distributed almost equally between the two sites.

2. SECURITY AND PERSONNEL REQUIREMENTS

A. GENERAL RESPONSIBILITIES

The Contractor shall be responsible for complying with the provisions of FETC's unclassified security program. The Contractor shall cooperate with the Computer Protection Program Manager (CPPM) and the Contracting Officer's Technical Representative (COR) in all information security matters.

B. CLASSIFIED MATERIAL

FETC normally does not handle classified material so the Contractor shall abide by all provisions of the Department of Energy (DOE) Order 1360.2A "Unclassified Computer Security Program" (incorporated by reference). However, "on request" services provided by the contractor off-site for other government agencies may require access to classified material and appropriate security clearances for contractor personnel performing the services.

C. ACCESS TO FACILITIES

The Contractor shall prohibit access to Government-furnished facilities of any persons other than authorized Government and Contractor employees, unless prior approval is obtained from the Contracting Officer or appropriate COR.

(1) The Contractor shall maintain the security within the facility. Anyone entering the facility who does not have a valid FETC identity badge must be processed through the FETC Visitor Registration process at the FETC Security Office or main lobby and must obtain a visitor identification badge and escorted by a FETC representative. All personnel who have not been issued a FETC identity badge shall be escorted.

D. PHYSICAL SECURITY

The Contractor shall be responsible for safeguarding and security all Government property provided for use under this contract. The Contractor shall notify the COR within 24 hours after discovery of any missing Government property.

E. PERSONNEL

The Contractor shall provide skilled personnel to support the tasks of this Statement of Work (SOW). The ability to respond and to perform support requirement with high quality services within stringent timeframes is essential. The Contractor shall be required to provide continuous performance regardless of vacation, sick leave, etc.

F. KEY PERSONNEL

The Contractor shall submit any changes in key personnel to the CO and COR at least 15 days prior to the planned date of the change. The CO and COR must approve these changes.

G. PERSONNEL ROSTER

Within ten (10) calendar days of the contract start date, the Contractor shall provide to the CO and the COR a list of the names of all personnel employed by the Contractor to perform work under this contract (by support areas). The Contractor shall supply a current employee roster report of the above description to the COR monthly or as personnel changes occur.

H. TURNOVER NOTIFICATIONS

The Contractor shall notify the COR in writing within one (1) working day from the time when a Contractor employee has given official notice of resignation. When a Contractor employee has been terminated the Contractor shall orally notify the COR within two (2) hours of the employee's termination. This shall be followed by a written notification. When the decision has been made by the Contractor to reassign a Contractor employee to another support task, the Contractor shall provide at least one (1) working day verbal notice to the COR before the reassignment occurs. The limits specified above are minimum requirements and a two week notice is highly recommended. Upon resignation or termination, the Contractor shall assure that a "Contractor Employee Exit Checklist" (Same as FETC government employee exit checklist) is completed and that the employee obtains required clearances for each functional area on the checklist. A copy of the checklist is to be delivered to the COR on the workday following the employee's permanent departure from the site. The Contractor Employee Exit Checklist shall also ensure the COR that procedures have been followed to restrict access to FETC facilities and computer applications.

I. MANAGER

The Contractor shall provide an on-site Project Manager who shall be responsible for the performance of the work under this contract.

(1) Designation: The Contractor shall designate in writing to the Contracting Officer the name of this person and an alternate who shall act for the Contractor when the manager is absent. The Contractor Project Manager and alternate must be able to fluently read, write, speak, and understand English. The alternate must be prepared to perform all of the duties and responsibilities of the Contractor Project Manager and shall also perform duties of a working Team Leader or equivalent.

(2) Authority:: The Contractor shall ensure that the local Manager and Alternate shall have full authority to act for the Contractor on all matters relating to the daily operation of this contract. The Manager shall act as the central point of contact with the COR and Contracting Officer designate.

(3) Availability: The Manager or Alternate shall be available during normal work hours at the contract site.

J. CONTRACTOR EMPLOYEES

The Contractor shall provide personnel with a diversity of skills suitable to provide the services referenced in the SOW in an efficient, competent, knowledgeable and cooperative manner.

(1) General Requirements: The Contractor shall provide fully trained and competent personnel who have the ability to perform assignments with high quality performance, exhibiting managerial, professional, and technical competence in operations of business and technical computing systems, telecommunications systems, desktop computers, installations, maintenance, testing and software maintenance and development

(2) Administrative and Managerial Staff: The Contractor shall provide staff for necessary administrative and supervisory support of this contract. The Contractor shall provide effective supervisory staff that carries out the technical work requirements in support of operation assignments and shall communicate regularly with the COR.

(3) Employee Restrictions: The CO may restrict the employment under this contract of any Contractor employee or prospective Contractor employee who is identified as a potential threat to the health, safety, security, general well-being or operational mission of FETC.

(4) Certified/Licensed Employees: To operate a Government vehicle, the Contractor personnel must have a valid and current state of residence driver's license.

(5) Training Responsibility: The Contractor shall provide the necessary fully trained and experienced technical and lead personnel for performance in support of the Government. Training shall be provided by the Contractor at its own expense, except when the government has given prior approval for training to meet special requirements that are peculiar to a particular work assignment. The Government shall pay any direct charges associated with authorized training, e.g. tuition, travel, and per them (if required), and the Contractor shall pay, without government reimbursement, salary and other expenses. Training at Government expense shall not be authorized for replacement of personnel nor for the purpose of keeping Contractor employee abreast of advances in the state-of-the-art or for training Contractor employees on equipment, computer language, and computer operating systems that are available on the commercial market.

(6) Performance of Official Business: The Contractor shall ensure that all its employees only perform work or training related to this contract while on FETC premises. The Contractor shall not solicit new business nor recruit FETC employees or other FETC Contractor employees while on FETC premises.

(7) Communication with FETC Personnel: The CO or COR may issue technical direction to the Contractor's designated site manager regarding clarification and refinement of schedules, deliverables, and acceptance criteria issues.

(8) Professional Conduct: The Contractor shall ensure that all of its personnel conduct themselves in a courteous, professional manner with both FETC employees and other Contractor personnel retained by FETC. The Contractor's employees shall present an appearance consistent with the attire of the particular FETC area in which the Contractor employee is working.

K. KEY CONTROL

The Contractor shall ensure there is adequate control of keys, lock combinations, and access cards to preclude the loss, misplacement or unauthorized use and access to government equipment and facilities. The Contractor shall not duplicate keys issued by the Government.

(1) In the event the Contractor loses Government keys, the Government shall replace, or re-key, all keys or locks as the Government deems necessary. The Government shall deduct the total cost for replacing locks and keys from the monthly payment due the Contractor. In the event a master key is lost or duplicated, the Government shall replace all locks and keys for that system and deduct the total cost for replacement from the monthly

payment due to Contractor; or at the Government's discretion, the Government shall require the Contractor to replace locks and keys to the COR's satisfaction.

(2) The Contractor shall report any occurrence of a lost or misplaced key to the COR within 4 hours of discovering that a key has been lost or misplaced. The Contractor shall provide a follow-up report, in writing, to the COR within 24 hours.

(3) The Contractor shall prohibit the use of Government-issued keys by any persons other than the Contractor's authorized employees.

L. COMBINATION

The Contractor shall ensure there is control of combinations for cipher locks. The Contractor shall notify the COR within one workday after termination of employment of all Contractor employees who have access to the combination. The Contractor shall establish and implement methods to ensure that no lock combinations are revealed to unauthorized persons. The procedures shall be included in the Contractors Quality Control Program.

M. PERSONNEL AND SECURITY

(1) Building Access: The Contractor shall require all contract employees' to complete the appropriate forms for computer and Building access security.

(2) Identification Badge: The Contractor shall obtain an identification badge for each Contractor employee from FETC Security prior to entry on duty. Contractor employees shall display this identification badge at all times within FETC facilities. Contractor shall be responsible for returning badge of departing employee to Security.

(3) Name Plate: The Government shall provide each Contractor employee a permanent name plate for his/her workstation that contains both the name of the Contractor employee and the name of the Contractor firm. The name plate shall be prominently displayed on the outside of the work station.

N. DATA SECURITY

All information, whether stored in the computer, in hard copy form, or on magnetic media, shall be protected from disclosure, and unauthorized modification or destruction at all times. Contractor personnel shall take all precautions to protect the information and programs and shall report all suspected violations to the COR or CPPM.

Information processed and stored by these Information Resource systems shall include some information which must be safeguarded from disclosure and alteration. That information is subject to protection by the Privacy Act of 1974 or The Freedom of Information Act (5 USC, Section 552). The Contractor agrees, in the performance of this contract, to keep sensitive information in the strictest of confidence and to take reasonable measures to protect it from unauthorized modification or destruction, said information being the sole property of the Government. The Contractor also agrees not to publish, reproduce, or otherwise divulge such information in whole or in part, in any manner or form, and not to authorize or permit others to do so. The Contractor shall take such reasonable measures as are necessary to restrict access to this information, while in his possession, to those employees needing such information to perform the work provided herein, e.g. on a "need to know" basis. The Contractor shall immediately verbally notify, and notify in writing before the close of business of the next day, the Government COR or the CO or his authorized representative, in the event that the Contractor has or has reason to suspect a breach of data security occurred.

3. HOURS OF OPERATIONS

A. WEEKENDS AND RECOGNIZED HOLIDAYS

The Contractor may be required to work from time to time on federally observed holidays and weekends to meet specific work requirements. The Contractor shall be provided advance notice, when feasible, of at least twenty four (24) hours by the CO or COR should this be required.

B. WORK AT HOME

The Contractor is expected to perform the tasks and activities identified in this SOW. The Government may authorize contractor work at home for specific occasions with identified deliverables and with prior approval from the COR. The Contractor must request approval one week in advance. The Contractor shall identify in writing the deliverables the Contractor personnel will be providing.

The Contractor will report to the COR on a monthly basis the following: (1) who worked at home, (2) what work was performed, and (3) total hours worked at home.

C. ON-CALL SUPPORT

The Contractor shall provide on-call support on a 24-hour a day, 7 days a week basis resolving hardware and software problems or providing other emergency support. The Government shall provide the Contractor with the necessary pagers (or other communications equipment) as deemed appropriate by the COR. The Contractor shall respond to any off-hour inquiry/problem from the COR via telephone within sixty (60) minutes of call and have staff on-site within three hours of initial contact if deemed necessary. The contractor shall respond to off-hour requirements as necessary to maintain operations and quality services, meet deadlines, and handle emergencies. The contractor shall notify the COR or designated representative of after hours work.

D. HOURS OF OPERATION - WEEKDAYS

SERVICE - GOVERNMENT WORK SCHEDULE 0800-1630 EXCEPT AS NOTED BELOW	
Computer Facility Operations	0700-1730 (unattended with personnel available on-site)
LAN/WAN Operations	0700-1730
Info Desk	0700-1730

Increased hours of operation may require staffing on weekends or holidays due to increased workload or special usage.

4. CONSERVATION OF UTILITIES

The Contractor shall instruct Contractor employees in utilities conservation practices. The Contractor shall operate under conditions that preclude the waste of utilities.

The Contractor shall use lights only in areas where and at the time when work is actually being performed except in those areas essential for purpose of safety and security.

The Contractor shall monitor and maintain control over the computer facility environment to avoid extremes of temperatures, humidity, or particle content. The Contractor shall make recommendations on the continuation or cessation of operations in borderline situations. The Contractor shall monitor conditions within the computer room and report deviations from normal range to the COR and facilities management within fifteen (15) minutes of discovery.

5. LIMITATION ON SOFTWARE

The Contractor shall not copy, change (with the exception of vendor-supplied updates or maintenance requirements) or release to a third party, Government-furnished software, including other vendors' proprietary software, for any purpose other than that for which it was provided to the Contractor under the terms of this contract.

Unless provided as Government-furnished software, the Contractor shall not use software in which the Contractor holds proprietary rights, or rights as a licensee, without the prior written authorization of the Contracting Officer.

The Contractor agrees not to restrict the design and development of software in such a fashion that it shall unreasonably favor specific vendor hardware and software.

6. **ADMINISTRATION**

A. **DISCLOSURE OF INFORMATION**

Performance under this contract requires the Contractor to access data and information proprietary to a Government agency, another Government Contractor or of such nature that its dissemination or use, other than as specified in this SOW, would be adverse to the interests of Government and/or others. Neither the Contractor nor any Contractor personnel shall divulge or release data or information developed or obtained under performance of this contract, except to authorized Government personnel or upon written approval of the COR. The Contractor shall not use, disclose or reproduce proprietary data which bears a restrictive legend other than as specified in this contract.

(1) Disclosure of information regarding operations and services of the activity to persons not entitled to receive it, (or any persons under the Contractor's control) in connection with work under this contract, may subject the Contractor, Contractor's agent or employees to criminal liability under Title 18, Section 793 and 798 of the United States Code. Neither the Contractor nor Contractor's employees shall disclose or cause to disseminate, any information concerning the operation of the activity which could result in, or increase the likelihood of, the possibility of a breach of security or interrupt the continuity of operation.

(2) All inquiries, comments or complaints arising from all matters observed, experienced or learned as a result of, or in connection with, the performance of this contract, the resolution of which may require dissemination of official information, shall be directed to the COR or other designated agency official.

(3) Inquiries received by the Contractor for information and/or work products performed under this contract shall be referred to the Government for evaluation under the Freedom of Information Act of 1975, Public Law 93-502, 5 U.S.C., Section 552. The decision of whether records shall be released shall remain with the Government. The Contractor shall be responsible for search and submission of records upon request by the Government.

(4) The Contractor shall not release information regarding individuals without prior authority of the Contracting Officer. All documentation showing individuals names or other personal information shall be controlled and protected. The provisions of the Privacy Act of 1974, Public Law 93-579, 5 U.S.C., Section 552a, shall apply.

B. **HOUSEKEEPING**

The Contractor shall perform necessary housekeeping functions to assure all assigned spaces within the control of the Contractor present a safe, neat and orderly appearance. The Contractor shall perform area inspections to check for water, steam leaks, and other environmental conditions which could result in damage to Government property under the cognizance of the Contractor. The Contractor shall report problems or potential problems to the COR immediately.

C. INNOVATIONS

The contractor may submit to the CO alternative technical approaches, pricing structures, and changes to processes and procedures if the Contractor believes another approach may more economically and efficiently satisfy Governments requirements in this contract.

7. **TRANSITION**

A. GENERAL

The Contractor shall cooperate fully with FETC and the predecessor or successor Contractor to ensure a smooth and orderly transition that ensures minimum disruption to FETC business pursuant to the CONTINUITY OF SERVICES clause.

B. OBSERVATION PERIOD

After contract award and prior to start date, the Contractor shall be allowed to observe performance of this effort. FETC personnel shall be available to provide assistance. Such observations shall take place on a non-interference basis and time and group size shall be coordinated with the COR prior to arrival.

C. PHASE-OUT OF THIS CONTRACT

The Contractor shall complete ongoing work or otherwise prepare work for an orderly transition to its successor. The Contractor shall assemble in an orderly and logical manner and deliver to the COR at least seven (7) days prior to the end of the contract all working papers such as, but not limited to, drawings, charts, diagrams, source and object electronic files of computer programs, computer and application system documentation, notes on work performed, as well as any information of an administrative nature which the COR may require.

8. **GOVERNMENT FURNISHED PROPERTY AND SERVICES**

A. GENERAL

The Government shall provide, without cost to the Contractor, the facilities, equipment and services listed in Section J - Attachment I. All such facilities, equipment and services shall be used by the Contractor only in performance of this contract.

B. PROPERTY

The Contractor shall comply with provisions of the FETC's Property Management Manual.

C. FACILITIES

The Government shall provide facilities to support all on-site contractor personnel. The Contractor shall not make any modification to the facilities without specific written permission from the COR. The Government shall provide for normal repairs and/or alterations of facilities. The Contractor shall submit a written request to the COR when facility repair or maintenance is required.

Standard office equipment including desktop computers and peripherals will be provided for all contractor employees that qualify within the FETC security program. All employees assigned a desktop computer will be given access to the FETC LAN/WAN and provided network printing capability.

D. EQUIPMENT

No later than five working days after the phase-in period, the Contractor shall conduct a joint inventory with the CO or designated Government Representative. The Contractor and Government representative shall jointly determine the working order and physical condition of all equipment and certify the findings on the inventory sheets. This inventory shall serve as the baseline for determining

fair wear and tear to the equipment at the completion of the contract. A detailed list of Government Furnished Property will be provided at time of award.

E. SUPPLIES

Office supplies used on-site to support this contract shall be furnished by the Government or its designate. The COR shall be notified when supplies need to be ordered.

(1) Forms: The Government shall supply Government forms necessary to perform the SOW. The Contractor shall contact the COR when forms become necessary. Some forms are available only in electronic format.

(2) Disposal Containers: Appropriate disposal containers shall be provided by the Government for disposition of business sensitive documents and waste recycling such as paper.

The Government shall provide access to licensed and custom software needed to perform the SOW.

F. SOFTWARE AND DOCUMENTATION

The Government shall make available (paper or electronic) manufacturer operation manuals, standard operating procedures, software diagnostics, computer operations manual, and any available documentation for application software required for Contractor personnel to perform the specific tasks defined in the SOW. The Contractor shall keep these manuals current and shall return same to the Government, at the expiration of this contract.

9. SERVICES

The Government shall provide the following services. The Contractor shall use these services for official use only, in performance of the required services specified in this SOW.

(1) Utilities: The Government shall provide electricity, water, lights, sewage, and heating or cooling.

(2) Mail Distribution: The Government shall provide mail pick-up and delivery of official mail.

(3) Postage: Government-provided postage is restricted to official correspondence.

(4) Telephone: Telephones shall be provided for Contractor-personnel to make official local and long distance calls. The Contractor shall be responsible for reimbursing the Government for telephone service calls to repair, modify, replace, etc. due to Contractor employee negligence, misuse, or damage.

(5) Custodial Service: The Government shall provide custodial services to include emptying of trash cans, vacuuming, shampooing of carpeted areas, and cleaning of blackboards in Government furnished facilities.

(6) Refuse Collection: The Government shall provide refuse collection at Government-furnished facilities.

(7) Insect and Rodent Control: The Government shall provide insect and rodent control in Government-furnished facilities. The Contractor shall notify the COR when the facilities appear to be infested.

(8) Printing and Reproduction: Office copiers shall be provided according to Government policies for their use. The Contractor shall use FETC's Graphics and Printing facilities for the productions of documentation required in support of this SOW.

- (9) Equipment Maintenance: The Government shall issue and administer third party contracts that cover equipment maintenance not specified in this SOW.
- (10) Security Police and Fire Protection: In case of emergency, the Contractor shall notify the Security Office immediately. The Contractor shall obtain these phone numbers from the COR and keep them posted and up to date at all times.
- (11) Transportation: The Government shall provide vehicular service to the extent necessary for Contractor to provide the required services in the SOW.

10. SCOPE OF WORK

A. Background

FETC is federally owned and operated. FETC, located at P.O. Box 880, 3610 Collins Ferry Road, Morgantown, West Virginia, and at P.O. Box 10940, 626 Cochran's Mill Road, Pittsburgh (Bruceton, South Park Township), Pennsylvania, is an international leader in solving energy and environmental problems. FETC performs, procures, and partners in technical research, development, and demonstration (RD&D) to advance technology into the commercial marketplace, thereby benefitting the environment, contributing to U.S. employment, and advancing the position of U.S. industries in the global market. FETC was created in December 1996 through the consolidation of the former Morgantown Energy Technology Center and the former Pittsburgh Energy Technology Center. These predecessor organizations have been involved in fossil energy research for the past 50 years. A total of 550 Federal employees and 550 Contractor employees work at FETC, roughly half at each site. The two sites are 65 miles apart. Both sites have a Local Area Network (LAN) joined by three T-1 lines to form a Wide Area Network with approximately 1200 users. Two remote locations, one in Tulsa, Oklahoma with about 50 users and a second one in Albany, Oregon with approximately 70 users are also part of the FETC WAN. The Tulsa site uses T-1 lines and the Albany site uses frame relay lines to access the network. Support for these two remote sites is provided by FETC staff. Occasionally travel to these remote sites for short periods may be required to provide support.

The FETC is the home for DOE's Corporate Human Resources Information System (CHRIS). The System uses PeopleSoft's Human Resources software and is accessed interactively by Human Resources personnel from 25 major DOE sites through frame relay T-1 lines.

Currently, there are approximately 50 contractor FTE's (including supervisory and administrative personnel) distributed among four contractors at the FETC providing the services described in this SOW. This number does not include the additional 5.5 FTE's who will be required to provide CHRIS support. This number is informational only and does not restrict or indicate the level of effort that may be needed for the proposed services.

B. General

The Contractor shall provide both equity and symmetry in all services for the Morgantown and Pittsburgh sites. Equity means the same level of service will apply to both sites i.e., if the Info Desk responds to calls within 2 hours of receiving the call at one site, the same performance will apply at the other site. Symmetry refers to the availability of similar services at both sites even though a service may not be actually located at both sites. For example, desktop computer repairs will be available for both sites but a repair shop may only be at one site. Of those employees designated to be onsite, equity and symmetry will be considered to be achieved with a minimum of 40% of contractor support personnel to be onsite at each location.

The Contractor, except as may be otherwise specified herein, shall furnish the necessary management, supervision, qualified personnel, materials, supplies, equipment, facilities, training, technical expertise, and services required to provide FETC with the technical, management and administrative services, except those provided by the Government, delineated herein or as may otherwise be approved by the DOE Contracting Officer's Representative (COR) and authorized by the DOE Contracting Officer (CO) on a task order basis. The services called for by this contract shall be performed at the FETC site locations or DOE approved locations. The Contractor may utilize services,

personnel, or other necessary facilities of its field or home offices to support the FETC as authorized by the DOE CO.

The Contractor shall ensure responsive and value added quality services in information management and communications; comply with all DOE and FETC Directives; be an intellectual partner with the FETC Information Resources Management Division; and consistently demonstrate effective, cost and quality support. The contractor shall submit recommendations for cost savings throughout the performance of the contract and provide input to the IRM's Strategic and Operational Plans.

C. Definitions

"CO" shall mean the United States Department of Energy's duly authorized Contracting Officer.

"Contractor" shall mean the party contracting with the United States Department of Energy in performance of this contract.

"COTS" shall mean commercial off the shelf software.

"COR" shall mean the United States Department of Energy's duly authorized Contracting Officer's Representative(s).

"DOE" shall mean the United States Department of Energy or its authorized representative(s).

"FETC" shall mean the Federal Energy Technology Center, a field office of the Department of Energy located in Morgantown, West Virginia and in Pittsburgh, (Bruceton, South Park Township) Pennsylvania.

"Government" shall mean the United States Department of Energy or its duly authorized contracting and/or technical representative(s).

"Home Office" shall mean the Contractor's permanent business office location.

"IPS" shall mean Information Processing Services and references all of the services being requested for this contract. It also is the acronym used to refer to this solicitation.

"IRM" shall mean the FETC's Information Resources Management Division which manages all computing resources and services at the FETC.

"Off-Site" shall mean those Contractor personnel, resources, or services located or provided at a site other than FETC.

"On-Site" shall mean those Contractor personnel, resources, or services located or performed at the United States Department of Energy's Federal Energy Technology Center at Morgantown, West Virginia and at Pittsburgh (Bruceton in South Park Township), Pennsylvania.

"Subcontractor" and "Subcontractors" shall mean the party or parties to whom parts of the work are sublet by the Contractor.

"Vendor" and "Vendors" shall mean the party or parties responsible for supplying material, components, equipment, or equipment items purchased by the Government's Contractor or its Subcontractors.

11. COMPREHENSIVE INFORMATION PROCESSING SERVICES TASKS TO BE SUPPORTED (CHIPS)

At a minimum, comprehensive information processing services support shall consist of the following.

11.1 Desktop and General Computing (End User) Support

The contractor shall provide technical and administrative support for the operation, installation and maintenance of existing, new and upgraded microcomputer software and hardware for FETC's client

(end user) community. The hardware and software can include but are not limited to desktop and laptop computers, scientific workstations, terminals (connected to host), printers, modems, network interface cards, disk drives, memory, COTS, custom software, operating systems etc.

The contractor shall operate an InfoDesk with a courteous and responsive staff. The primary role of the InfoDesk will be to respond to questions concerning the primary application software and hardware used at the FETC and to log and track requests for resolution of hardware and software problems, and installation, maintenance and repair/replacement of hardware and software applicable to end users. The InfoDesk will accommodate an average of approximately 1000 calls per month. The contractor shall be required to do (but is not limited to) the following to provide the required support for desk top and general computing services.

- A. Strive to keep all clients (users) up and running on their computers 100% of the time during normal working hours. Ninety percent of all InfoDesk calls to be closed within 24 hours.
- B. Record and assign all client support calls via the FETC InfoDesk.
- C. Quickly respond and resolve client hardware and software problems by phone to the maximum extent possible and at the client station when required.
- D. Use existing and develop new standard operating procedures for all work performed in support of client equipment and software.
- E. Inform users accurately and expediently regarding the application of computer technology to solve their information needs.
- F. Provide limited on-site repairs for desktop computers, printers, monitors and other peripherals. Repairs will consist primarily of component replacement. Complex repairs will be accomplished off-site by a government designated vendor. The contractor will track equipment repaired off-site to insure work is done in a timely manner.
- G. Manage a spare parts inventory for computers, communications equipment, and peripheral components to minimize equipment repair time. Parts, supplies and equipment required for ON-SITE repairs will be purchased by the government as requested by the Contractor.
- H. Assist to develop, and when required, update, install and maintain a site standard desktop hardware and software configuration that is deployed to the 1200 plus desktop computers at the FETC.
- I. Provide consulting support when requested for scientific workstation network integration, and operation of backup and archival software for scientific process simulation and modeling applications.
- J. Track all client, network, application, and information technology system problems and/or repairs.
- K. Maintain electronic records of computer equipment and software using the FETC property system. Maintain repairs, failures, status, history and other information.
- L. Coordinate and support the installation, service, technical consulting, and repair of desktop computers, printers, terminals, workstations, and other computing resources.
- M. Maintain and operate a central repository for providing, maintaining, and managing a "loaner pool" of laptop computers, replacement desktop computers, cell phones, telephones, and pagers.
- N. Develop, maintain and interpret user help guides, as required. Develop and conduct limited user training of supported software based on guidance from IRM.
- O. Assure quality control of all general computing, desktop support and Info Desk processes.

- P. Notify users and key personnel of planned and unplanned outages of computer systems, networks, and other major components.
- Q. Assist in the development of specifications for acquiring information technology resources to meet designated requirements.
- R. Respond promptly to Customer requests for help or assistance. Users and key personnel shall be kept informed on the progress of the action.
- S. Track license and pertinent maintenance agreement information for the computer hardware and software installed at the site and any designated external location.
- T. Utilize and maintain metering software to analyze, record and when applicable warn government staff (COR or designated representative) of potential disparities in the number of concurrent users and corresponding software licenses for any software used on the FETC LAN/WAN.
- U. Notify the government of any maintenance agreements or software licenses that will expire within 60 days prior to the expiration date, and submit the purchase requisition to the government procurement system for the renewal at least 45 days prior to expiration date.

11.2 Computer Facility Operations (Client Server Support)

The Contractor shall provide the necessary supervision, and labor to: support the operation of the two (2) FETC Computer Facilities and other computing resources; and to provide analytical, technical, administrative, and engineering support for the connection of desktop computers, mini-computers, file, data base, and application servers, peripherals, workstations, and other devices into the FETC local, metropolitan, and wide area network(s) within and outside of FETC. The Contractor shall rigorously attempt to achieve 100% availability for all of FETC's networks (excluding planned down times) and computing resources and to do the following (but not limited to):

- A. Perform all assigned functions/activities in this task using standard operating procedures (SOP) that combine the Contractor's corporate experience and standards with FETC's existing processes. The operating procedures shall be documented and all staff shall be trained to adhere to them.
- B. Monitor all network and computer systems and components using manual or electronic (if feasible) check-off sheets to record and monitor system status and processing areas.
- C. Monitoring the Computer Center environment such as temperature, humidity, water flow for applicable equipment, electric power and the equipment used to maintain and control the environment. The HVAC shall be monitored by the Contractor, utilizing the alarms on the units as well as the alarm system. The facilities support group and appropriate maintenance personnel shall be notified immediately when problems occur. The temperature and humidity in the computer room shall be maintained at the desired level.
- D. Run and technically support production jobs in accordance with defined schedules and in compliance with current policies and procedures for application systems. This support includes but is not limited to hardware and software maintenance; client and server back-ups, recovery and restores; and performing data base maintenance procedures including data base backups and restores. Data base management software supported includes, but is not limited to, Oracle, SQL Server, Foxpro, Lotus Notes and Microsoft Access.
- E. Operate and maintain the hardware and software for WEB (Internet and Intranet) and data base servers and other computing platforms with but not limited to Novell Netware, Windows NT, Windows 9x, DEC OSF and VMS, and SCO Unix operating systems. This shall include firewalls as appropriate.
- F. Perform periodic file server, data base, and computer system backups to tape and disk media in accordance with schedules and frequencies defined by the IRM Division.

- G. Recover, reload, and restore files, server volumes, and data bases as required to provide immediate user access to the most up-to-date current data.
- H. Develop and test once each calendar year a Disaster Recovery Plan for the FETC Computer Facilities and the networks. The contractor will certify to and receive documented approval from the designated IRM representative that the test was satisfactorily completed.
- I. Support as required the integration of FETC's enterprise systems including legacy systems, databases, and technology interfaces.
- J. Analyze, design, and implement systems using but not limited to Boosch and Rambaugh's Unified Modeling Language (UML).
- K. Perform current state assessments and evaluate emerging information management technologies and plan for the integration of these technologies into the FETC infrastructure.
- L. Conduct a comprehensive technology and information support preventative maintenance (PM) program for FETC's hardware and software. These PM activities shall be developed and operated in a manor consistent with industry standards and guidelines, and manufacturer recommended maintenance schedules. Generally, this work is performed during "off-hours" and shall be scheduled and approved by IRM in advance. A yearly (PM) schedule is to be published to all FETC employees allowing adequate mission planning during planned service outages.
- M. Provide technical support for operations and maintenance for FETC's collaborative Messaging System (GroupWise 5.5) Operate and maintain both inbound and outbound Internet E-mail services for all FETC desktop computers and workstation connecting to the FETC Network. Operate and maintain web based e-mail services.
- N. Provide electronic collaborative Messaging services for FETC, DOE's Albany, Oregon, DOE's Tulsa, Oklahoma, DOE's Cheat Lake Contractor Facility, and DOE's HQ Facilities.

11.3 Technology and Information Support

The contractor shall support and update as required the FETC unclassified Computer Security Program. The contractor shall keep the FETC networks and all of its components secure from internal and external threats. The contractor shall do the following (but not be limited to):

- A. Conduct risk assessments, and computer security assurance reviews as required.
- B. Perform security audits, follow-up reviews, and computer equipment and software acquisition reviews.
- C. Develop and provide computer security training and system access violation monitoring.
- D. Develop and maintain computer security and protection plans.
- E. Conduct vulnerability assessments to avoid waste, fraud and abuse.
- F. Conduct special projects involving evaluation and application of computer security technology.
- G. Create and maintain a Security Team that can quickly detect and respond to network and computer security problems such as virus infections, unauthorized access to the FETC network, unauthorized use of government computing resources both internally and externally, and other potential infractions specified by the Team.
- H. Audit continually, to ensure that appropriate software licenses exist on site for any software installed by the contractor on desktop, network and central computing platforms and components, and notify appropriate Government staff of deviations from authorized licenses.

- I. Provide Y2K Assurance and Compliance Support.
- J. Provide assistance in maintaining IRM's, project reporting, tracking, short and long range planning.

11.4 **Enterprise Systems Development and Maintenance**

The contractor shall develop new application systems, and maintain and/or enhance existing FETC applications referenced in Section J, Attachment J, in accordance with FETC's Enterprise System Development Methodology referenced in Section J, Attachment K (document titled FETC Enterprise Architecture Methodology). The activities performed in this evolutionary methodology include requirements capture, analysis, architecture, design and implementation. In addition, the contractor shall provide consultation and training. For Enterprise Systems Development, including CHRIS, the specified number of FTEs in Attachment J, Attachment C, is the minimum required to support the task. The contractor shall do the following (but limited to):

- A. Develop, test, document and install new or enhancements to application systems as required, using FETC's standard development tools which include but are not limited to Centura SQL Windows, Delphi, and Oracle Developer 2000.
- B. Perform maintenance of application software to include: changing and modifying systems through a change request procedure; system and program documentation updates; periodic reviews of system operations to ensure maximum effectiveness; and problem resolution of system failures and programming errors.
- C. Provide configuration management support to ensure appropriate change control and custom application library management.
- D. Test all new and changed application systems thoroughly to preclude failures in a production environment.
- E. Develop API's (application program interfaces), install and maintain COTS and application software as required for various operating systems, databases, and programming language environments to include but not limited to Novell NetWare, Windows NT, Windows 9x, UNIX, VMS, DEC OSF, C++, JAVA, Visual Basic, SQL, Microsoft Access, Oracle, Lotus Notes and Microsoft SQL Server.
- F. Design and code application systems to ensure data can easily be recovered and restored from operating system crashes, program aborts and media failures.
- G. Aggressively search for COTS and existing application systems at other government agencies or external sources to satisfy the FETC's requirements for new or replacement application systems.
- H. Inform IRM staff and the FETC user community on the planned or actual availability of new and/or innovative technology that will provide a more efficient or acceptable solution for a known, planned or existing IRM requirement or system. Assist IRM staff in evaluating new technology for the FETC.
- I. Provide technical assistance for system integration functions utilizing available hardware and software interfaces, investigating potential integration functions and services, and installing and testing connections, interactions and operations between different operating, application, network and database systems.
- J. Code, test, install, and monitor queries to generate reports and retrieve data from DISCAS, and other HQ databases and computer systems. Tools and languages used include, but are not limited to Powerhouse, COBOL, Focus, and Lotus Notes.
- K. Provide information analyst support for capturing, analyzing and modeling of FETC business processes.

- L. Of the 17.5 FTE minimum level-of-effort for support of Enterprise Systems Development and Maintenance, a mandatory FTE of 5.5 is required for support of the DOE Corporate Human Resources Information System (CHRIS) as described in Section J, Attachment C.

11.5 Telecommunication (Data, Video, Voice and Switched Voice) Services

Provide technical support in the design, operation, upgrading, re-configuration, and selection of FETC telecommunications components, automated switched voice/data (Information Exchange) systems, and cable facilities. The contractor shall:

- A. Maintain, ~~upgrade~~, test and perform system integration ~~for~~ FETC non-secure video teleconferencing systems, ~~facilities~~ and networks.
- B. Provide technical support to efficiently and effectively operate FETC's voice and telephone communication systems to include but not limited to: coordinate proposals for hardware and software additions; provide moves, adds, and changes of phone service at the PBX, communication closet, internal circuit and handset levels; and accomplish problem determination and troubleshooting of telephone and data circuits.
- C. Manage and maintain FETC's Octel voice messaging system, including (but not limited to) system configuration, mailbox configuration, add/delete/change voice mailbox configurations, and maintain documentation of system/mailbox configurations.
- D. Provide technical support for operation and maintenance of FETC's Audio Emergency Notification System.
- E. Perform remedial maintenance, as required, and periodic preventive maintenance on FETC's data communications cable plant.
- F. Install, move, configure, maintain, monitor performance, test, diagnose, and resolve problems for all network hardware and software components.
- G. Assist the FETC IRM Division to plan and implement FETC's network architecture and infrastructure.
- H. ~~Install, maintain, update~~ and operate software for network and configuration management and/or ~~network security~~.
- I. Provide engineering and technical support in the design, development, implementation, and maintenance of facilities, services, topologies, network protocols, network architecture, and equipment such as, but not limited to, fiber optic cable, Ethernet, FDDI (Fiber Distribution Data Interface), SONET (Synchronous Optical Network), ISDN (Integrated Services Digital Network), Asynchronous Transfer Mode (ATM), Frame Relay, packet switching networks, connectivity elements of the networks (such as bridges, routers, hubs, and switches), store and forward message networks and voice networks.
- J. Coordinate circuit implementation and performance of communication networks with commercial vendors, resolve substandard communications performance in a timely manner, analyze hardware and software, and develop conceptual designs.
- K. Develop and complement network engineering contingency and evaluation plans.
- L. Update and maintain network engineering and operations documentation and FETC telephone system hardware and wiring documentation.
- M. Setup and configure video teleconferencing studios and equipment for scheduled sessions, and train users to use the equipment. Install, maintain, and train users to operate desktop video teleconferencing systems as required.

- N. Monitor all networks and components using manual or electronic (if feasible) check-off sheets to record and monitor system status and processing areas.

SECTION J
ATTACHMENT B

CONTRACT REPORTING REQUIREMENTS CHECKLIST

Contract Title: Comprehensive Information Processing Services Support for the FETC (CHIPS)

Contract No: DE-RP26-99FT40139

REPORT/PLAN	FORM NO.	REPORT FREQ.	NO. OF COPIES
A. GENERAL MANAGEMENT:			
<input checked="" type="checkbox"/> Technical Planning Report	None	Y	•
<input checked="" type="checkbox"/> Cost and Manpower Planning Report	None	Y	•
<input checked="" type="checkbox"/> Quarterly Performance Self-Assessment Report	None	Q	•
<input checked="" type="checkbox"/> Status Report	None	M	•
<input checked="" type="checkbox"/> Summary Report	1332.2	M	•
B. SCHEDULE/LABOR/COST:			
<input checked="" type="checkbox"/> Cost Management Report	1332.9	M	•
<input checked="" type="checkbox"/> Labor Management Report	1332.8	M	•
<input type="checkbox"/> Wages and Benefits Reconciliation Report			
C. ES&H REPORTS:			
<input checked="" type="checkbox"/> ES&H Hot Line Report	None	A	•
<input checked="" type="checkbox"/> DOE/FETC ES&H Reports (DOE O 231.1, M 231.1-1, O 232.1)	See Orders and Manual	A	•
<input checked="" type="checkbox"/> Integrated Safety Management Plan (DOE 450.4)	See DOE Order	O**	•
D. EXCEPTION AND OTHER REPORTS:			
<input checked="" type="checkbox"/> Hot Line Reports (General)	None	A	•
<input checked="" type="checkbox"/> Property Inventories	See DEAR 945	***	•
<input type="checkbox"/> Subcontracting Report for Individual Contracts			
<input type="checkbox"/> Summary Subcontracting Report			
<input checked="" type="checkbox"/> Staffing Report	None	Q	•
<input checked="" type="checkbox"/> Quality Assurance and Quality Control (QA/QC) Plan	None	O	•
E. SPECIAL INSTRUCTIONS:			
<ul style="list-style-type: none"> * Reports are to be distributed electronically, along with two hard copies, to a FETC-identified distribution list. If the submission involves a DOE Standard Form, the contractor may submit the requested information in a format of its own choosing, as long as the same information is given. The reports in this checklist apply to the contract in general. STATEMENTS OF WORK FOR TASKS AND SUBTASKS MAY REQUIRE OTHER SPECIFIC REPORTS AND/OR DELIVERABLES. ** Plan is to be updated annually. *** See the following Description of Reports for details related to the eight property reports that are due. 			
FREQUENCY CODES A As necessary or required M Monthly; within 15 calendar days after the end of the report period O One time, within thirty calendar days after contract award Q Quarterly, within 20 calendar days after the end of the report period S Semiannually, within 20 calendar days after the end of the report period Y Yearly (see narrative descriptions of reports for further details)			

DESCRIPTION OF REPORTS

TECHNICAL PLANNING REPORT

In response to FETC's Task Assignments, the contractor is to annually submit a Technical Planning Report. This report is to describe, from a technical perspective, the contractor's approach to implementation of the tasks and subtasks that FETC has requested the contractor to perform over the next one-year period. This report is to present detailed information at the subtask, task, and composite levels.

COST AND MANPOWER PLANNING REPORT

In response to FETC's Task Assignments, the contractor is to submit a Cost and Manpower Planning Report. This report is to describe, from a cost and manpower perspective, the contractor's approach to implementation of the tasks and subtasks that FETC has requested the contractor to perform over the next one-year period. This report is to present detailed information at the subtask, task, and composite levels.

QUARTERLY PERFORMANCE SELF-ASSESSMENT REPORT

For all contract tasks and subtasks involved in an award-fee determination, the contractor is to provide a self-assessment of work performed during the previous quarter. This report is to include a comprehensive summary of the activities implemented and a self-assessment of performance based on technical performance, cost control, schedule, environment, safety and health, and socio-economic criteria.

STATUS REPORT

The Status Report presents the contractor's narrative technical assessment of the work actually performed and the overall status of the various tasks and subtasks. Open items requiring action by either the contractor or DOE are noted in this report. The report also provides a summary assessment of the current situation, including forecast of the near future and the expected impact on task and/or subtask accomplishment. The report is to include a listing of the major accomplishment for each task and subtask in bullet form and, if applicable, a list of pertinent presentations and publications.

SUMMARY REPORT (DOE F 1332.9)

The Summary Report provides a concise, top-level synopsis of schedule, labor, and cost performance. Most data are presented graphically. The format permits rapid visual comparison of schedule, labor, and cost data. Three components are presented: a cost status graph, a labor status graph, and a milestone chart. The cost and labor graphs are presented on a cumulative basis. Planned and actual numerical data are presented for the specified period. Labor and cost variances are shown on a monthly and cumulative basis.

COST MANAGEMENT REPORT (DOE F 1332.9)

The Cost Management Report shows the cost status of the contract at the subtask, task and composite levels. Cost information is to be provided at the B&R (Budget and Reporting) and Cost Center level.

LABOR MANAGEMENT REPORT (DOE F 1332.8)

The Labor Management Report is a report of the status of labor resource utilization. This information is to be presented at the subtask, task, and composite levels.

ES&H HOT LINE REPORT

- A. The "ES&H Hot Line Report" is to be used to report an ES&H violation. The report must be submitted by the most rapid means available, usually electronic, and is to confirm telephone conversations with DOE representatives. Identification as an "ES&H Hot Line Report" serves notice at each link in the delivery chain that speed in handling is required. The report must include:

1. Contractor's name and address

2. Contract title and number
3. Date
4. Brief statement of problem or event
5. Anticipated impacts
6. Corrective action taken or recommended

B. ES&H Hot Line Reports are to be used to document incidents such as those listed below:

1. Any non-compliance with the provisions of Clause H.20 ENVIRONMENT, SAFETY, AND HEALTH—ON-SITE SERVICE CONTRACTS is to be reported within three days, unless specified otherwise below.
2. Any single fatality or injuries requiring hospitalization of five or more individuals is to be immediately reported.
3. Any significant environmental permit violation is to be reported as soon as possible, but no later than 24 hours following the discovery of the incident.
4. Other ES&H incidents that have the potential for visibility in the media are to be reported as quickly as possible, but no later than 24 hours following the discovery of the incident.
5. Any failure resulting in damage to Government-owned equipment in excess of \$50,000 is to be reported as quickly as possible, but no later than 24 hours following the discovery of the failure.
6. Any verbal or written Notice of Violation of any ES&H statutes arising from the performance of this contract is to be immediately reported.
7. Any accidental spill or release that is in violation of any ES&H statutes arising from the performance of this contract is to be immediately reported.
8. Any incident that causes a significant process- or hazard-control-system failure, or is indicative of one that may lead to any of the above-defined incidents, is to be reported as soon as possible, and must be reported within 5 days of discovery.
9. When an event results in the need to issue a written or verbal statement to the local media, the statement is to be cleared first, if possible, by FETC's Public Relations Officer and coordinated with the COR.

DOE/FETC ES&H REPORTS IN SUPPORT OF DOE/FETC'S ENVIRONMENT, SAFETY, AND HEALTH REPORTING REQUIREMENTS

- A. The contractor shall provide information and reports to FETC in support of DOE's reporting requirements contained in DOE O 231.1, ENVIRONMENT, SAFETY, AND HEALTH REPORTING, DOE M 231.1-1, ENVIRONMENT, SAFETY, AND HEALTH REPORTING MANUAL, and DOE O 232.1, OCCURRENCE REPORTING AND PROCESSING OF OPERATIONS INFORMATION. Content, form, schedule, and applications are provided in the DOE Orders.
- B. Data, information, or reports include, but are not limited to, the following areas (if applicable):
 1. Work-related fatalities, injuries, and illnesses among contractor employees arising out of work performed primarily at DOE-owned or -leased facilities
 2. Work-hours and vehicle usage
 3. Estimated property valuation
 4. Interim exposure data reporting
 5. Annual exposure data reporting

6. Radiological exposure to individuals
 7. Annual summary of fire damage
 8. Epidemiologic analyses—excess injuries and illnesses
 9. Occupational, safety, and health information in support of epidemiological studies conducted by external organizations
 10. Quarterly DOE ES&H performance indicator data
 11. Annual site environmental reports.
- C. As needed, information reports associated with the notification, recording and reporting requirements for accidents and/or incidents shall be prepared in accordance with 29 CFR 1904 and 1910. The Contracting Officer or his/her representative shall be provided with copies of all OSHA-required documentation within ten days of the associated accident and/or incident.
- D. On a quarterly basis, the contractor shall report on the following FETC environment, safety, and health indicators (if applicable):
1. Recordable Injury/Illness Rate (total number of OSHA-defined recordable injuries and illnesses/total hours worked)
 2. Lost Workday Case Rate (total number of OSHA-defined lost workday cases/total hours worked)
 3. Regulated Pollutant Effluent (total pounds of permitted, regulated pollutants in air and water releases)
 4. Hazardous Waste Generated (total cubic feet of hazardous waste shipped)
 5. Corrective Maintenance Backlog (total number of corrective maintenance items pending over 90 days old and total number of corrective maintenance items due)
 6. Preventive Maintenance Backlog (total number of preventive maintenance items pending over 90 days old and total number of preventive maintenance items due)

INTEGRATED SAFETY MANAGEMENT PLAN

An Integrated Safety Management Implementation Plan shall be developed and submitted by the contractor. The plan shall describe how the offeror will implement ISM philosophy, as outlined in DOE P 450.4, Safety Management Policy, October 15, 1996, and Integrated Safety Management System Guide, DOE G 450.4-1, Volumes 1 and 2, November 26, 1997, into the planning, budgeting, execution, and assessment of work activities. The plan shall provide (1) a process approach to the integration of ISM's five functions (i.e., defining the scope of work, analyzing the hazards, developing and implementing controls, performing work safely, and ensuring performance) into its everyday work activities, (2) a specific management approach to demonstrate ISM's seven guiding principles (i.e., workforce responsibility and accountability; clear roles, responsibilities and authorities; competence commensurate with responsibilities; balance priorities; identification of ES&H standards and requirements; hazard controls tailored to work being performed; and work authorization), and (3) relevant past and current experiences with ISM implementation, if experience exists. An annual update is also required.

HOT LINE REPORTS (GENERAL)

A general "Hot Line Report" is to be used to report information of a critical nature to DOE management. The report shall be submitted by the most rapid means available, usually electronic, and should normally confirm telephone conversations with DOE representatives. Identification as an "Hot Line Report" serves notice at each link in the delivery chain that speed in handling is required. The report must include:

1. Contractor's name and address

2. Contract title and number
3. Date
4. Brief statement of problem or event
5. Anticipated impacts
6. Corrective action taken or recommended

PROPERTY INVENTORIES

- ✓ 1. High Risk Property Report
Frequency--Annually
- x 2. Monthly Motor Vehicle Use Records (FETC 4440.3)
Frequency--Monthly
- N/A 3. Report of Physical Inventory of Permanently Affixed Plant
Frequency--Not less than once every 10 years
Description and Format--See FAR 45.5 and DEAR 945.5
- ✓ x 4. Report of Physical Inventory of Capital Equipment
Frequency--Not less than once every 2 years
Description and Format--See FAR 45.5 and DEAR 945.5 and FETC Handbook entitled "Management of Government Property in the Possession of Off-site Contractors"
- ✓ 5. Report of Physical Inventory of Sensitive Items
Frequency--Not less than annually
Description and Format--See FAR 45.5/6 and DEAR 945.5/6 and FETC Handbook entitled "Management of Government Property in the Possession of Off-site Contractors"
6. Report of Termination or Completion Inventory
Frequency--Immediately upon contract completion or termination
Description and Format--See FAR 45.5/6 and DEAR 945.5/6. Use form enclosed with FETC Handbook.
- ✓ 7. Report of Contractor's Property Management System
Frequency--One time, within six months after contract award
Description and Format--This report is to describe the contractor's comprehensive written property management system. It must address the contractor's written system for controlling, protecting, preserving, and maintaining all Government property. The report format must be consistent with the contractor's system and must as a minimum enable comprehensive evaluation by the Government.
- ✓ 8. Annual Report of Government-Owned Property
Frequency--annually, due October 15
Description and Format--See FAR 45.505-14 and FETC Handbook entitled "Management of Government Property in the Possession of Off-site Contractors"

STAFFING REPORT

The required staffing data, which are to represent the workforce distribution as of the last day of the preceding month, include (1) a headcount of all on-site contractor personnel being paid using Fossil Energy funds, and (2) full-time equivalent personnel (to be reported as working on activities funded by various funding agencies, subdivided by location according to a format to be provided by FETC).

QUALITY ASSURANCE AND QUALITY CONTROL (QA/QC) PLAN

Within 30 days after award the contractor must deliver a draft QA/QC Plan for the contract. Fifteen days will be allotted for review and approval. The Plan shall define the QA/QC system and organizational or operational structure proposed for use by the contractor to achieve consistency with the most recent version of DOE Order 5700.6 (Quality Assurance), conformity to FETC's QA/QC Program, and assurances that all work performed for FETC uses QA/QC measures as appropriate to:

1. Achieve accuracy, precision, and reproducibility of data delivered under the contract
2. Control experimental operations using accepted technical standards, instructions, and other appropriate means commensurate with the complexity and risk of the work
3. Identify, control, and maintain components, equipment, facilities, hardware, and material
4. Control handling, storage, shipping, cleaning, and preservation to minimize or prevent damage, loss, or deterioration
5. Control calibration, maintenance, accountability, and use of measuring and testing equipment used for monitoring and data collection
6. Ensure that designs use sound engineering/scientific principles and appropriate standards, and demonstrate that equipment and processes perform as intended
7. Ensure that purchased items and services meet established specifications and requirements
8. Incorporate inspections as appropriate
9. Continually improve the quality of the work done for DOE through the improvement of work practices guided by internal performance assessments.

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EXEMPT
POSITION QUALIFICATIONS

POSITION	QUALIFICATIONS
Data Base Administrator	<p>Bachelors Degree or equivalent and 3 years related experience in logical/ physical data base design with relational data bases accessed from a local or wide area network. Minimum 3 years experience using SQL, "C++", Visual Basic, JAVA, COBOL, or FORTRAN to access relational data bases.</p> <p>Performs logical and physical data base design and maintenance. Provides guidance and expertise in the use of data base languages. Performs data analysis, database design, development, and maintenance activities, and implementation, aided, for databases and database conversion. Develops interfaces and subroutines to access data from different computing platforms and operating systems. Performs data storage and access requirements.</p>
Info Desk Specialist	<p>High School Diploma. Minimum 2 years experience in Info Desk operations, PC hardware/software installation and maintenance or related experience.</p> <p>Serves as the initial point of contact for troubleshooting hardware/software PC and printer problems.</p>
Management Analyst	<p>Bachelors Degree or equivalent and 5 years of IRM related analysis.</p> <p>Develops, implements, monitors policies and procedures for information resources management. Analyzes areas of concern such as procurements, software licensing, maintenance contracts, inefficiencies, distribution of resources etc. and presents feasible alternatives and recommendations based on thorough research and analysis. Collects, compiles, and assembles data for financial, resource allocation, and analytical reports.</p>
Information Analyst	<p>Bachelor's Degree or equivalent and 2 years experience. Six (6) years experience is considered equivalent to a Bachelor's Degree.</p> <p>Performs in-depth analysis of multiple business process Model the processes using Unified Modeling Language (UML). Able to translate findings in a concise and clear summation when needed to both Business Management Officers and Information Architect. Responsible for successful completion of assigned project details that meets customer needs. Must be able to accurately forecast costs and risks of projects to FETC. Responsible for assisting in the evaluation of staffing requirements. Responsible for understanding global business requirements via interview process of Business Domain Experts. Competent in all phases of complex analysis of customer requirements and end results. Operates very independently on all types of projects. Communicates strategies, methodology and pertinent findings as required. Understands where technology can be inserted into the business to maximize benefits and minimize costs. Bridges the gap between the business and technology areas of the enterprise. Research and understand alternative information analysis techniques.</p>
Network Engineer	<p>Bachelors Degree or equivalent and 3 years related experience in network management, operations and or maintenance. Six years experience is considered equivalent to a Bachelor's degree.</p> <p>Performs a variety of network engineering tasks, either independently or under supervision, which are broad in nature and are concerned with the design, implementation, maintenance and operation of integrated networks, including personnel, hardware, software and support facilities and/or equipment. Performs with some latitude for unreviewed actions and decisions.</p>

POSITION	QUALIFICATIONS
Network Technician	<p>Bachelors Degree or High School diploma and 5 years experience. Six (6) years experience is considered equivalent to a Bachelor's Degree. There is no experience substitution for a High School Degree, however, a G.E.D. or other degree equivalency program is acceptable.</p> <p>Works under supervision to form a variety of network engineering tasks which are broad in nature and are concerned with the operation and maintenance of integrated networks, including hardware, software and/or equipment. for voice and data communications. Works under the supervision of a Sr. Network Engineer or Network Engineer.</p>
Programmer/Analyst	<p>Bachelor's Degree or equivalent and (2) years experience. Six (6) years experience is considered equivalent to a Bachelor's Degree. With a Master's Degree, no experience is required.</p> <p>Analyzes and evaluates manual and automated business and administrative systems, both current and proposed, translates customer requirements for information systems into detailed application system/program requirements. Acts as a team leader and provides limited technical guidance to other programmers and technical staff. Provides alternatives, recommendations, and assistance to managers involved in the development, integration, and installation of business and administration information systems. Prepares programming specifications and diagrams when required. Develops or revises computer programs requiring knowledge of computer programming languages such as COBOL, FORTRAN, "C++", SQL, JAVA and Visual Basic. Prepares detailed complex systems/program documentation and flowcharts and assists with systems installation.</p>
Senior Network Engineer	<p>Certified Network Engineer certification in Novell NDS network or corresponding certification for Windows NT. Bachelor's Degree or equivalent and 6 years experience. Six (6) years experience is considered equivalent to a Bachelor's Degree. With a Master's Degree, four (4) years of experience is acceptable.</p> <p>Performs a variety of network engineering tasks, either independently or under supervision, which are broad in nature and are concerned with the design, implementation, maintenance and operation of integrated networks, including personnel, hardware, software and support facilities and/or equipment. Supervises Network Engineers as required to ensure project completion.</p>
Sr. Systems Analyst	<p>Bachelor's Degree or equivalent and 8 years related work experience. Six (6) years experience is considered equivalent to a Bachelor's Degree. With a Master's Degree, six (6) years of experience is acceptable.</p> <p>Performs a variety of system design, analysis, and engineering tasks which are broad in nature and are concerned with design and implementation of major enterprise systems development and integration, including supporting personnel, hardware, software, and support facilities and/or equipment. Oversees team of system professionals and technicians in installing and maintaining custom and commercial application software. Assists system professionals and technicians in installing and maintaining operation system, network, and data base management software. Codes, tests, and documents computer programs, modules, subroutines, linkages to Windows objects and application program interfaces to commercial software using two or more programming languages. Has ability to adapt to new situations and environments. Possess keen troubleshooting skills to assist other System Analysts and Program Managers.</p>

POSITION	QUALIFICATIONS
Computer Systems Analyst	<p>Bachelor's Degree or equivalent and 5 years experience. Six (6) years experience is considered equivalent to a Bachelor's Degree. With a Master's Degree, three (3) years of experience is acceptable.</p> <p>Under general supervision, performs a variety of system design, analysis, and engineering tasks which are local in nature and are concerned with design, maintenance, integration and implementation of application systems including supporting personnel, hardware, software, and support facilities and/or equipment. Assists system professionals and technicians in installing and maintaining custom and commercial operating system, network, and application software. Designs small and medium application computer systems including program flow and structure, network and user interfaces, and data structures and access methods. Codes, tests, and documents computer programs, modules, subroutines, and linkages to Windows objects using one or more programming languages. Provides hotline support to customers. Has ability to adapt to new situations and environments. Possesses keen troubleshooting skills to assist Sr. Systems Analysts/Designers.</p>

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WAGE RATE DETERMINATIONS

REGISTER OF WAGE DETERMINATION UNDER | U.S. DEPARTMENT OF LABOR
THE SERVICE CONTRACT ACT | EMPLOYMENT STANDARDS
ADMINISTRATION

By direction of the Secretary of Labor | WAGE AND HOUR DIVISION

| Washington, D.C. 20210

(Original Signed) |

| Wage Determination No.: 94-2573

| Revision No.: 11

Division of Wage Determinations | Date of Last Revision: 09/21/1998

| State): Kentucky, Ohio, West Virginia

| Areas: Kentucky COUNTIES OF Boyd, Carter, Elliott, Floyd, Greenup, Johnson, Lawrence, Lewis, Magoffin, Martin, Pike
Ohio COUNTIES OF Monroe, Morgan, Noble, Washington, West Virginia ALL COUNTIES

--** Fringe Benefits Required For All Occupations Included In This Wage Determination Follow The Occupational Listing **
OCCUPATION CODE AND TITLE MINIMUM HOURLY WAGE

Administrative Support and Clerical Occupations:

01011 Accounting Clerk I \$ 6.27
01012 Accounting Clerk II \$ 7.92
01013 Accounting Clerk III \$ 13.78
01014 Accounting Clerk IV \$ 15.42
01030 Court Reporter \$ 12.96
01050 Dispatcher, Motor Vehicle \$ 12.96
01060 Document Preparation Clerk \$ 10.25
01070 Messenger (Courier) \$ 7.28
01090 Duplicating Machine Operator \$ 10.25
01110 Film/Tape Librarian \$ 11.58
01115 General Clerk I \$ 7.28
01116 General Clerk II \$ 8.18
01117 General Clerk III \$ 10.25
01118 General Clerk IV \$ 11.51
01120 Housing Referral Assistant \$ 14.35
01131 Key Entry Operator I \$ 6.33
01132 Key Entry Operator II \$ 9.30
01191 Order Clerk I \$ 6.58
01192 Order Clerk II \$ 7.92
01261 Personnel Assistant (Employment) I \$ 8.39
01262 Personnel Assistant (Employment) II \$ 9.41
01263 Personnel Assistant (Employment) III \$ 11.79
01264 Personnel Assistant (Employment) IV \$ 13.24
01270 Production Control Clerk \$ 12.90
01290 Rental Clerk \$ 11.58
01300 Scheduler, Maintenance \$ 11.58
01311 Secretary I \$ 11.58
01312 Secretary II \$ 12.96
01313 Secretary III \$ 14.14
01314 Secretary IV \$ 15.95
01315 Secretary V \$ 17.67
01320 Service Order Dispatcher \$ 11.58
01341 Stenographer I \$ 10.32
01342 Stenographer II \$ 11.58
01400 Supply Technician \$ 14.34
01420 Survey Worker (Interviewer) \$ 12.96

01460 Switchboard Operator-Receptionist .34
 01510 Test Examiner \$ 12.96
 01520 Test Proctor \$ 12.96
 01531 Travel Clerk I \$ 8.09
 01532 Travel Clerk II \$ 8.61
 01533 Travel Clerk III \$ 9.15
 01611 Word Processor I \$ 10.25
 01612 Word Processor II \$ 11.51
 01613 Word Processor III \$ 12.87
 Automatic Data Processing Occupations:
 03010 Computer Data Librarian \$ 8.89
 03041 Computer Operator I \$ 8.89
 03042 Computer Operator II \$ 9.95
 03043 Computer Operator III \$ 11.09
 03044 Computer Operator IV \$ 12.32
 03045 Computer Operator V \$ 13.65
 03071 Computer Programmer I 1/ \$ 11.35
 03072 Computer Programmer II 1/ \$ 14.05
 03073 Computer Programmer III 1/ \$ 17.18
 03074 Computer Programmer IV 1/ \$ 20.79
 03101 Computer Systems Analyst I 1/ \$ 15.90
 03102 Computer Systems Analyst II 1/ \$ 19.23
 03103 Computer Systems Analyst III 1/ \$ 23.06
 03160 Peripheral Equipment Operator \$ 8.89
 Automotive Service Occupations:
 05005 Automobile Body Repairer, Fiberglass \$ 14.72
 05010 Automotive Glass Installer \$ 13.55
 05040 Automotive Worker \$ 13.55
 05070 Electrician, Automotive \$ 14.03
 05100 Mobile Equipment Servicer \$ 12.55
 05130 Motor Equipment Metal Mechanic \$ 14.52
 05160 Motor Equipment Metal Worker \$ 13.55
 05190 Motor Vehicle Mechanic \$ 14.52
 05220 Motor Vehicle Mechanic Helper \$ 12.02
 05250 Motor Vehicle Upholstery Worker \$ 13.07
 05280 Motor Vehicle Wrecker \$ 13.55
 05310 Painter, Automotive \$ 14.03
 05340 Radiator Repair Specialist \$ 13.55
 05370 Tire Repairer \$ 12.55
 05400 Transmission Repair Specialist \$ 14.52
 Food Preparation and Service Occupations:
 07010 Baker \$ 9.07
 07041 Cook I \$ 8.39
 07042 Cook II \$ 9.07
 07070 Dishwasher \$ 6.92
 07100 Food Service Worker (Cafeteria Worker) \$ 6.92
 07130 Meat Cutter \$ 9.07
 07250 Waiter/Waitress \$ 7.39
 Furniture Maintenance and Repair Occupations:
 09010 Electrostatic Spray Painter \$ 14.22
 09040 Furniture Handler \$ 11.19
 09070 Furniture Refinisher \$ 14.22
 09100 Furniture Refinisher Helper \$ 12.19
 09110 Furniture Repairer, Minor \$ 13.25
 09130 Upholsterer \$ 14.22
 General Service and Support Occupations:
 11030 Cleaner, Vehicles \$ 6.92
 11060 Elevator Operator \$ 6.92
 11090 Gardener \$ 8.39
 11121 Housekeeping Aide I \$ 6.43
 11122 Housekeeping Aide II \$ 6.92

11150 Janitor \$ 6.92
 11210 Laborer, Grounds Maintenance \$ 7.3.
 11240 Maid or Houseman \$ 6.43
 11270 Pest Controller \$ 8.75
 11300 Refuse Collector \$ 6.92
 11330 Tractor Operator \$ 8.45
 11360 Window Cleaner \$ 7.39
 Health Occupations:
 12020 Dental Assistant \$ 10.09
 12040 Emergency Medical Technician/Paramedic Ambulance Driver
 \$ 10.09
 12071 Licensed Practical Nurse I \$ 8.82
 12072 Licensed Practical Nurse II \$ 9.90
 12073 Licensed Practical Nurse III \$ 11.07
 12100 Medical Assistant \$ 9.02
 12130 Medical Laboratory Technician \$ 9.02
 12160 Medical Record Clerk \$ 9.02
 12190 Medical Record Technician \$ 12.49
 12221 Nursing Assistant I \$ 6.22
 12222 Nursing Assistant II \$ 6.99
 12223 Nursing Assistant III \$ 7.63
 12224 Nursing Assistant IV \$ 8.57
 12250 Pharmacy Technician \$ 11.24
 12280 Phlebotomist \$ 9.02
 12311 Registered Nurse I \$ 12.96
 12312 Registered Nurse II \$ 15.28
 12313 Registered Nurse II, Specialist \$ 15.28
 12314 Registered Nurse III \$ 18.49
 12315 Registered Nurse III, Anesthetist \$ 18.49
 12316 Registered Nurse IV \$ 22.16
 Information and Arts Occupations:
 13002 Audiovisual Librarian \$ 15.95
 13011 Exhibits Specialist I \$ 11.34
 13012 Exhibits Specialist II \$ 14.05
 13013 Exhibits Specialist III \$ 17.18
 13041 Illustrator I \$ 11.34
 13042 Illustrator II \$ 14.05
 13043 Illustrator III \$ 17.18
 13047 Librarian \$ 17.67
 13050 Library Technician \$ 12.96
 13071 Photographer I \$ 10.14
 13072 Photographer II \$ 11.34
 13073 Photographer III \$ 14.05
 13074 Photographer IV \$ 17.18
 13075 Photographer V \$ 20.77
 Laundry, Drycleaning, Pressing and Related Occups:
 15010 Assembler \$ 6.08

 15030 Counter Attendant \$ 6.08
 15040 Dry Cleaner \$ 7.81
 15070 Finisher, Flatwork, Machine \$ 6.08
 15090 Presser, Hand \$ 6.08
 15100 Presser, Machine, Drycleaning \$ 6.08
 15130 Presser, Machine, Shirts \$ 6.08
 15160 Presser, Machine, Wearing Apparel, Laundry \$ 6.08
 15190 Sewing Machine Operator \$ 8.39
 15220 Tailor \$ 8.96
 15250 Washer, Machine \$ 6.62
 Machine Tool Operation and Repair Occupations:
 19010 Machine-Tool Operator (Toolroom) \$ 14.22
 19040 Tool and Die Maker \$ 14.75

Materials Handling and Packing Occupat

21010 Fuel Distribution System Operator \$ 12.00
21020 Material Coordinator \$ 12.49
21030 Material Expediter \$ 12.49
21040 Material Handling Laborer \$ 7.90
21050 Order Filler \$ 10.35
21071 Forklift Operator \$ 11.50
21080 Production Line Worker (Food Processing) \$ 11.11
21100 Shipping/Receiving Clerk \$ 8.55
21130 Shipping Packer \$ 8.55
21140 Store Worker I \$ 9.81
21150 Stock Clerk (Shelf Stocker; Store Worker II) \$ 11.96
21210 Tools and Parts Attendant \$ 11.11
21400 Warehouse Specialist \$ 11.11

Mechanics and Maintenance and Repair Occupations:

23010 Aircraft Mechanic \$ 14.72
23040 Aircraft Mechanic Helper \$ 12.19
23050 Aircraft Quality Control Inspector \$ 15.24
23060 Aircraft Servicer \$ 13.25
23070 Aircraft Worker \$ 13.73
23100 Appliance Mechanic \$ 14.22
23120 Bicycle Repairer \$ 12.72
23125 Cable Splicer \$ 14.72
23130 Carpenter, Maintenance \$ 14.22
23140 Carper Layer \$ 13.73
23160 Electrician, Maintenance \$ 14.72
23181 Electronics Technician, Maintenance I \$ 9.71
23182 Electronics Technician, Maintenance II \$ 16.46
23183 Electronics Technician, Maintenance III \$ 17.04
23260 Fabric Worker \$ 13.25
23290 Fire Alarm System Mechanic \$ 14.72
23310 Fire Extinguisher Repairer \$ 12.72
23340 Fuel Distribution System Mechanic \$ 14.72
23370 General Maintenance Worker \$ 13.73
23400 Heating, Refrigeration and Air-Conditioning Mechanic \$ 14.72
23430 Heavy Equipment Mechanic \$ 14.72
23440 Heavy Equipment Operator \$ 11.46
23460 Instrument Mechanic \$ 14.72
23470 Laborer \$ 6.92
23500 Locksmith \$ 14.22
23530 Machinery Maintenance Mechanic \$ 14.72
23550 Machinist, Maintenance \$ 14.72
23580 Maintenance Trades Helper \$ 12.19

23640 Millwright \$ 14.72
23700 Office Appliance Repairer \$ 14.22
23740 Painter, Aircraft \$ 14.22
23760 Painter, Maintenance \$ 14.22
23790 Pipefitter, Maintenance \$ 14.72
23800 Plumber, Maintenance \$ 14.22
23820 Pneudraulic Systems Mechanic \$ 14.72
23850 Rigger \$ 14.72
23870 Scale Mechanic \$ 13.73
23890 Sheet-Metal Worker, Maintenance \$ 14.72
23910 Small Engine Mechanic \$ 13.73
23930 Telecommunications Mechanic I \$ 14.72
23931 Telecommunications Mechanic II \$ 15.24
23950 Telephone Lineman \$ 14.72
23960 Welder, Combination, Maintenance \$ 14.72
23965 Well Driller \$ 14.72
23970 Woodcraft Worker \$ 14.72

23960 Woodworker \$ 14.72
 Personal Needs Occupations:
 24570 Child Care Attendant \$ 6.36
 24580 Child Care Center Clerk \$ 7.94
 24600 Chore Aide \$ 6.43
 24630 Homemaker \$ 8.82
 Plant and System Operation Occupations:
 25010 Boiler Tender \$ 14.72
 25040 Sewage Plant Operator \$ 14.22
 25070 Stationary Engineer \$ 14.72
 25190 Ventilation Equipment Tender \$ 12.19
 25210 Water Treatment Plant Operator \$ 14.22
 Protective Service Occupations:
 27004 Alarm Monitor \$ 6.98
 27006 Corrections Officer \$ 11.62
 27010 Court Security Officer \$ 13.31
 27040 Detention Officer \$ 11.62
 27070 Firefighter \$ 12.70
 27101 Guard I \$ 6.24
 27102 Guard II \$ 6.98
 27130 Police Officer \$ 15.60
 Stevedoring/Longshoremen Occupational Services:
 28010 Blocker and Bracer \$ 12.65
 28020 Hatch Tender \$ 12.65
 28030 Line Handler \$ 12.65
 28040 Stevedore I \$ 12.16
 28050 Stevedore II \$ 13.14
 Technical Occupations:
 29010 Air Traffic Control Specialist, Center 2/ \$ 24.05
 29011 Air Traffic Control Specialist, Station 2/ \$ 16.58
 29012 Air Traffic Control Specialist, Terminal 2/ \$ 18.26
 29023 Archeological Technician I \$ 12.27
 29024 Archeological Technician II \$ 13.72
 29025 Archeological Technician III \$ 17.00
 29030 Cartographic Technician \$ 17.00
 29035 Computer Based Training (CBT) Specialist/Instructor \$ 15.90
 29040 Civil Engineering Technician \$ 17.00
 29061 Drafter I \$ 8.65
 29062 Drafter II \$ 12.78
 29063 Drafter III \$ 15.63
 29064 Drafter IV \$ 17.00
 29081 Engineering Technician I \$ 11.08
 29082 Engineering Technician II \$ 12.43
 29083 Engineering Technician III \$ 15.20
 29084 Engineering Technician IV \$ 18.82
 29085 Engineering Technician V \$ 23.03
 29086 Engineering Technician VI \$ 27.62
 29090 Environmental Technician \$ 12.32
 29100 Flight Simulator/Instructor (Pilot) \$ 19.23
 29150 Graphic Artist \$ 15.90
 29160 Instructor \$ 15.36
 29210 Laboratory Technician \$ 11.09
 29240 Mathematical Technician \$ 18.82
 29361 Paralegal/Legal Assistant I \$ 14.14
 29362 Paralegal/Legal Assistant II \$ 15.95
 29363 Paralegal/Legal Assistant III \$ 19.51
 29364 Paralegal/Legal Assistant IV \$ 23.61
 29390 Photooptics Technician \$ 18.82
 29480 Technical Writer \$ 18.58
 29491 Unexploded Ordnance Technician I \$ 15.28

29492 Unexploded Ordnance Technician 18.49
 29493 Unexploded Ordnance Technician ... \$ 22.16
 29494 Unexploded Safety Escort \$ 15.28
 29495 Unexploded Sweep Personnel \$ 15.28
 29620 Weather Observer, Senior 3/ \$ 12.31
 29621 Weather Observer, Combined Upper Air & Surface Programs 3/ \$ 11.09
 29622 Weather Observer, Upper Air 3/ \$ 11.09
 Transportation/Mobile Equipment Operation Occups:
 31030 Bus Driver \$ 10.30
 31260 Parking and Lot Attendant \$ 6.68
 31290 Shuttle Bus Driver \$ 8.54
 31300 Taxi Driver \$ 8.19
 31361 Truckdriver, Light Truck \$ 8.54
 31362 Truckdriver, Medium Truck \$ 10.30
 31363 Truckdriver, Heavy Truck \$ 10.69
 31364 Truckdriver, Tractor-Trailer \$ 10.69
 Miscellaneous Occupations:
 99020 Animal Caretaker \$ 7.70
 99030 Cashier \$ 5.19
 99041 Carnival Equipment Operator \$ 8.45
 99042 Carnival Equipment Repairer \$ 8.85
 99043 Carnival Worker \$ 6.92
 99050 Desk Clerk \$ 6.34
 99095 Embalmer \$ 15.28
 99300 Lifeguard \$ 5.67
 99310 Mortician \$ 15.28
 99350 Park Attendant (Aide) \$ 7.12
 99400 Photofinishing Worker (Photo Lab Tech., Darkroom Tech) \$ 5.67
 99500 Recreation Specialist \$ 8.82
 99510 Recycling Worker \$ 8.05
 99610 Sales Clerk \$ 5.67
 99620 School Crossing Guard (Crosswalk Attendant) \$ 6.92

 99630 Sports Official \$ 5.67
 99658 Survey Party Chief (Chief of Party) \$ 9.65
 99659 Surveying Technician (Instr. Person/Surveyor Asst./Instr.) \$ 7.12
 99660 Surveying Aide \$ 5.19
 99690 Swimming Pool Operator \$ 9.07
 99720 Vending Machine Attendant \$ 8.05
 99730 Vending Machine Repairer \$ 9.07
 99740 Vending Machine Repairer Helper \$ 8.05

**** Fringe Benefits Required For All Occupations Included In This Wage Determination ****

HEALTH & WELFARE: \$1.39 per hour or \$55.60 per week or \$240.93 per month.

VACATION: 2 weeks paid vacation after 1 year of service with a contractor or successor; 3 weeks after 8 years; 4 weeks after 15 years.

Length of service includes the whole span of continuous service with the present contractor or successor, wherever employed, and with predecessor contractors in the performance of similar work at the same Federal facility. (See 29 CFR 4.173)

HOLIDAYS: Minimum of ten paid holidays per year: New Year's Day, Martin Luther King Jr.'s Birthday, Washington's Birthday, Memorial Day, Independence Day, Labor Day, Columbus Day, Veterans' Day, Thanksgiving Day, and Christmas Day. (A contractor may substitute for any of the named holidays another day off with pay in accordance with a plan communicated to the employees involved.) (See 29 CFR 4.174)

1/ Does not apply to employees employed in a bona fide executive, administrative, or professional capacity as defined and delineated in 29 CFR 541. (See 29 CFR 4.156)

2/ **APPLICABLE TO AIR TRAFFIC CONTROLLERS ONLY - NIGHT DIFFERENTIAL:** An employee is entitled to pay for all work performed between the hours of 6:00 P.M. and 6:00 A.M. at the rate of basic pay plus a night pay differential amounting to 10 percent of the rate of basic pay.

3/ **WEATHER OBSERVERS - NIGHT PAY & SUNDAY PAY:** If you work at night as part of a regular tour of duty, you will earn a night differential and receive an additional 10% of basic pay for any hours worked between 6pm and 6am. If you are a full-time employee (40 hours a week) and Sunday is part of your regularly scheduled workweek, you are paid at your rate of basic pay plus a

Sunday premium of 25% of your basic rate for 1 hour of Sunday work which is not overtime (occasional work on Sunday outside the normal tour of duty is considered overtime work).

**** UNIFORM ALLOWANCE ****

If employees are required to wear uniforms in the performance of this contract (either by the terms of the Government contract, by the employer, by the state or local law, etc.), the cost of furnishing such uniforms and maintaining (by laundering or dry cleaning) such uniforms is an expense that may not be borne by an employee where such cost reduces the hourly rate below that required by the wage determination. The Department of Labor will accept payment in accordance with the following standards as compliance:

The contractor or subcontractor is required to furnish all employees with an adequate number of uniforms without cost or to reimburse employees for the actual cost of the uniforms. In addition, where uniform cleaning and maintenance is made the responsibility of the employee, all contractors and subcontractors subject to this wage determination shall (in the absence of a bona fide collective bargaining agreement providing for a different amount, or the furnishing of contrary affirmative proof as to the actual cost), reimburse all employees for such cleaning and maintenance at a rate of \$4.25 per week (or \$.85 cents per day). However, in those instances where the uniforms furnished are made of "wash and wear" materials, may be routinely washed and dried with other personal garments, and do not require any special treatment such as dry cleaning, daily washing, or commercial laundering in order to meet the cleanliness or appearance standards

set by the terms of the Government contract, by the contractor, by law, or by the nature of the work, there is no requirement that employees be reimbursed for uniform maintenance costs.

**** NOTES APPLYING TO THIS WAGE DETERMINATION ****

Source of Occupational Titles and Descriptions: The duties of employees under job titles listed are those described in the "Service Contract Act Directory of Occupations," Fourth Edition, January 1993, as amended by the Second Supplement, dated August 1995, unless otherwise indicated. This publication may be obtained from the Superintendent of Documents, at 202-783-3238, or by writing to the Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402. Copies of specific job descriptions may also be obtained from the appropriate contracting officer.

REQUEST FOR AUTHORIZATION OF ADDITIONAL CLASSIFICATION AND WAGE RATE

{Standard Form 1444 (SF 1444)}

Conformance Process: The contracting officer shall require that any class of service employee which is not listed herein and which is to be employed under the contract (i.e., the work to be performed is not performed by any classification listed in the wage determination), be

classified by the contractor so as to provide a reasonable relationship (i.e., appropriate level of skill comparison) between such unlisted classifications and the classifications listed in the wage determination. Such conformed classes of employees shall be paid the monetary wages and furnished the fringe benefits as are determined. Such conforming process shall be initiated by the contractor prior to the performance of contract work by such unlisted class(es) of employees. The conformed classification, age rate, and/or fringe benefits shall be retroactive to the commencement date of the contract. {See Section 4.6 (C)(vi)} When multiple wage determinations are included in a contract, a separate SF 1444 should be prepared for each wage determination to which a class(es) is to be conformed. The process for preparing a conformance request is as follows: 1) When preparing the bid, the contractor identifies the need for a conformed occupation) and computes a proposed rate). 2) After contract award, the contractor prepares a written report listing in order proposed classification title), a Federal grade equivalency (FGE) for each proposed classification), job description), and rationale for proposed wage rate), including

information regarding the agreement or disagreement of the authorized representative of the employees involved, or where there is no authorized representative, the employees themselves. This report should be submitted to the contracting officer no later than 30 days after such unlisted class(es) of employees performs any contract work. 3) The contracting officer reviews the proposed action and promptly

submits a report of the action, together with the agency's recommendations and pertinent information including the position of the contractor and the employees, to the Wage and Hour Division, Employment Standards Administration, U.S. Department of Labor, for

review. (See section 4.6(b)(2) of Regulations 29 CFR Part 4). 4) Within 30 days of receipt, the Wage and Hour Division approves, modifies, or disapproves the action via transmittal to the agency contracting officer, or notifies the contracting officer that additional time will be required to process the request. 5) The contracting officer transmits the Wage and Hour decision to the contractor.

6) The contractor informs the affected employees. Information required by the Regulations must be submitted on SF 1444 or bond paper.

When preparing a conformance request, the "Service Contract Act Directory of Occupations" (the Directory) should be used to compare

job definitions to insure that duties requested are not performed by a classification already listed in the wage determination. Remember, it is not the job title, but the required tasks that determine whether a class is included in an established wage determination.

Conformances may not be used to artificially split, combine, or subdivide classifications listed in the wage determination.

REGISTER OF WAGE DETERMINATION UNDER
THE SERVICE CONTRACT ACT
By direction of the Secretary of Labor

U.S. DEPARTMENT OF LABOR
EMPLOYMENT STANDARDS ADMINISTRATION
WAGE AND HOUR DIVISION
Washington, D.C. 20210

Division of Wage Determinations

Wage Determination No.: 94-2451
Revision No.: 12
Date of Last Revision: 01/12/1999

State(s): Ohio, Pennsylvania

Areas: Ohio COUNTIES OF Belmont, Harrison, Jefferson, Tuscarawas
Pennsylvania COUNTIES OF Allegheny, Armstrong, Beaver, Bedford,
Blair, Butler, Cambria, Cameron, Centre, Clarion, Clearfield,
Clinton, Crawford, Elk, Erie, Fayette, Forest, Fulton, Greene,
Huntingdon, Indiana, Jefferson, Lawrence, McKean, Mercer, Potter,
Somerset, Venango, Warren, Washington, Westmoreland

** Fringe Benefits Required For All Occupations Included In
This Wage Determination Follow The Occupational Listing **

OCCUPATION CODE AND TITLE

MINIMUM HOURLY WAGE

Administrative Support and Clerical Occupations:

01011 Accounting Clerk I	\$ 8.17
01012 Accounting Clerk II	\$ 8.95
01013 Accounting Clerk III	\$ 11.12
01014 Accounting Clerk IV	\$ 15.10
01030 Court Reporter	\$ 11.12
01050 Dispatcher, Motor Vehicle	\$ 11.43
01060 Document Preparation Clerk	\$ 9.80
01070 Messenger (Courier)	\$ 7.50
01090 Duplicating Machine Operator	\$ 9.80
01110 Film/Tape Librarian	\$ 11.64
01115 General Clerk I	\$ 7.50
01116 General Clerk II	\$ 8.37
01117 General Clerk III	\$ 10.33
01118 General Clerk IV	\$ 12.90
01120 Housing Referral Assistant	\$ 13.69
01131 Key Entry Operator I	\$ 7.38
01132 Key Entry Operator II	\$ 8.99
01191 Order Clerk I	\$ 9.70
01192 Order Clerk II	\$ 11.60
01261 Personnel Assistant (Employment) I	\$ 9.00
01262 Personnel Assistant (Employment) II	\$ 10.05
01263 Personnel Assistant (Employment) III	\$ 11.07
01264 Personnel Assistant (Employment) IV	\$ 13.69
01270 Production Control Clerk	\$ 13.69
01290 Rental Clerk	\$ 11.64
01300 Scheduler, Maintenance	\$ 11.64
01311 Secretary I	\$ 11.64
01312 Secretary II	\$ 11.87
01313 Secretary III	\$ 13.69
01314 Secretary IV	\$ 15.61
01315 Secretary V	\$ 17.29
01320 Service Order Dispatcher	\$ 11.64
01341 Stenographer I	\$ 10.42
01342 Stenographer II	\$ 11.64
01400 Supply Technician	\$ 15.61
01420 Survey Worker (Interviewer)	\$ 11.12

01460 Switchboard Operator-Receptionist	\$ 8.09
01510 Test Examiner	\$ 11.12
01520 Test Proctor	\$ 11.12
01531 Travel Clerk I	\$ 7.92
01532 Travel Clerk II	\$ 8.48
01533 Travel Clerk III	\$ 9.11
01611 Word Processor I	\$ 9.49
01612 Word Processor II	\$ 12.61
01613 Word Processor III	\$ 13.51

Automatic Data Processing Occupations:

03010 Computer Data Librarian	\$ 11.41
03041 Computer Operator I	\$ 9.61
03042 Computer Operator II	\$ 10.55
03043 Computer Operator III	\$ 14.95
03044 Computer Operator IV	\$ 16.61
03045 Computer Operator V	\$ 18.39
03071 Computer Programmer I 1/	\$ 13.73
03072 Computer Programmer II 1/	\$ 15.66
03073 Computer Programmer III 1/	\$ 18.72
03074 Computer Programmer IV 1/	\$ 23.93
03101 Computer Systems Analyst I 1/	\$ 18.06
03102 Computer Systems Analyst II 1/	\$ 23.05
03103 Computer Systems Analyst III 1/	\$ 27.19
03160 Peripheral Equipment Operator	\$ 11.41

Automotive Service Occupations:

05005 Automobile Body Repairer, Fiberglass	\$ 16.23
05010 Automotive Glass Installer	\$ 15.07
05040 Automotive Worker	\$ 15.07
05070 Electrician, Automotive	\$ 15.67
05100 Mobile Equipment Servicer	\$ 13.96
05130 Motor Equipment Metal Mechanic	\$ 16.23
05160 Motor Equipment Metal Worker	\$ 15.07
05190 Motor Vehicle Mechanic	\$ 16.48
05220 Motor Vehicle Mechanic Helper	\$ 13.42
05250 Motor Vehicle Upholstery Worker	\$ 14.52
05280 Motor Vehicle Wrecker	\$ 15.07
05310 Painter, Automotive	\$ 15.67
05340 Radiator Repair Specialist	\$ 15.07
05370 Tire Repairer	\$ 13.96
05400 Transmission Repair Specialist	\$ 16.23

Food Preparation and Service Occupations:

07010 Baker	\$ 10.61
07041 Cook I	\$ 9.82
07042 Cook II	\$ 10.61
07070 Dishwasher	\$ 8.05
07100 Food Service Worker (Cafeteria Worker)	\$ 8.05
07130 Meat Cutter	\$ 10.61
07250 Waiter/Waitress	\$ 8.56

Furniture Maintenance and Repair Occupations:

09010 Electrostatic Spray Painter	\$ 15.67
09040 Furniture Handler	\$ 12.19
09070 Furniture Refinisher	\$ 15.67
09100 Furniture Refinisher Helper	\$ 13.42
09110 Furniture Repairer, Minor	\$ 14.52
09130 Upholsterer	\$ 15.67

General Service and Support Occupations:

11030 Cleaner, Vehicles	\$ 8.05
11060 Elevator Operator	\$ 8.05
11090 Gardener	\$ 9.82
11121 Housekeeping Aide I	\$ 7.54
11122 Housekeeping Aide II	\$ 8.05
11150 Janitor	\$ 8.05
11210 Laborer, Grounds Maintenance	\$ 8.56
11240 Maid or Houseman	\$ 7.54
11270 Pest Controller	\$ 10.22
11300 Refuse Collector	\$ 8.05
11330 Tractor Operator	\$ 9.45
11360 Window Cleaner	\$ 8.56

Health Occupations:

12020 Dental Assistant	\$ 9.84
12040 Emergency Medical Technician/Paramedic Ambulance Driver	\$ 9.94
12071 Licensed Practical Nurse I	\$ 10.49
12072 Licensed Practical Nurse II	\$ 11.78
12073 Licensed Practical Nurse III	\$ 13.17
12100 Medical Assistant	\$ 8.79
12130 Medical Laboratory Technician	\$ 8.79
12160 Medical Record Clerk	\$ 8.79
12190 Medical Record Technician	\$ 12.18
12221 Nursing Assistant I	\$ 6.38
12222 Nursing Assistant II	\$ 7.29
12223 Nursing Assistant III	\$ 7.83
12224 Nursing Assistant IV	\$ 8.79
12250 Pharmacy Technician	\$ 10.96
12280 Phlebotomist	\$ 8.79
12311 Registered Nurse I	\$ 15.77
12312 Registered Nurse II	\$ 15.77
12313 Registered Nurse II, Specialist	\$ 18.16
12314 Registered Nurse III	\$ 22.92
12315 Registered Nurse III, Anesthetist	\$ 24.15
12316 Registered Nurse IV	\$ 24.16

Information and Arts Occupations:

13002 Audiovisual Librarian	\$ 15.98
13011 Exhibits Specialist I	\$ 16.02
13012 Exhibits Specialist II	\$ 20.42
13013 Exhibits Specialist III	\$ 22.06
13041 Illustrator I	\$ 16.02
13042 Illustrator II	\$ 20.42
13043 Illustrator III	\$ 22.06
13047 Librarian	\$ 18.49
13050 Library Technician	\$ 13.42
13071 Photographer I	\$ 13.33
13072 Photographer II	\$ 16.02
13073 Photographer III	\$ 20.42
13074 Photographer IV	\$ 22.06
13075 Photographer V	\$ 26.67

Laundry, Drycleaning, Pressing and Related Occups:

15010 Assembler	\$ 6.33
15030 Counter Attendant	\$ 6.33
15040 Dry Cleaner	\$ 8.22
15070 Finisher, Flatwork, Machine	\$ 6.33

15090 Presser, Hand	\$ 6.33
15100 Presser, Machine, Drycleaning	\$ 6.33
15130 Presser, Machine, Shirts	\$ 6.33
15160 Presser, Machine, Wearing Apparel, Laundry	\$ 6.33
15190 Sewing Machine Operator	\$ 8.82
15220 Tailor	\$ 9.41
15250 Washer, Machine	\$ 7.03

Machine Tool Operation and Repair Occupations:

19010 Machine-Tool Operator (Toolroom)	\$ 15.67
19040 Tool and Die Maker	\$ 21.99

Materials Handling and Packing Occupations:

21010 Fuel Distribution System Operator	\$ 13.96
21020 Material Coordinator	\$ 14.19
21030 Material Expediter	\$ 14.19
21040 Material Handling Laborer	\$ 12.65
21050 Order Filler	\$ 13.42
21071 Forklift Operator	\$ 12.99
21080 Production Line Worker (Food Processing)	\$ 13.12
21100 Shipping/Receiving Clerk	\$ 12.37
21130 Shipping Packer	\$ 12.59
21140 Store Worker I	\$ 9.94
21150 Stock Clerk (Shelf Stocker; Store Worker II)	\$ 12.59
21210 Tools and Parts Attendant	\$ 13.12
21400 Warehouse Specialist	\$ 13.12

Mechanics and Maintenance and Repair Occupations:

23010 Aircraft Mechanic	\$ 16.23
23040 Aircraft Mechanic Helper	\$ 13.42
23050 Aircraft Quality Control Inspector	\$ 16.76
23060 Aircraft Servicer	\$ 14.52
23070 Aircraft Worker	\$ 15.07
23100 Appliance Mechanic	\$ 15.67
23120 Bicycle Repairer	\$ 13.96
23125 Cable Splicer	\$ 16.23
23130 Carpenter, Maintenance	\$ 15.67
23140 Carper Layer	\$ 15.07
23160 Electrician, Maintenance	\$ 17.66
23181 Electronics Technician, Maintenance I	\$ 14.10
23182 Electronics Technician, Maintenance II	\$ 16.63
23183 Electronics Technician, Maintenance III	\$ 18.18
23260 Fabric Worker	\$ 14.52
23290 Fire Alarm System Mechanic	\$ 16.23
23310 Fire Extinguisher Repairer	\$ 13.96
23340 Fuel Distribution System Mechanic	\$ 16.23
23370 General Maintenance Worker	\$ 15.07
23400 Heating, Refrigeration and Air-Conditioning Mechanic	\$ 16.23
23430 Heavy Equipment Mechanic	\$ 16.23
23440 Heavy Equipment Operator	\$ 16.23
23460 Instrument Mechanic	\$ 16.23
23470 Laborer	\$ 11.24
23500 Locksmith	\$ 15.67
23530 Machinery Maintenance Mechanic	\$ 16.23
23550 Machinist, Maintenance	\$ 17.79
23580 Maintenance Trades Helper	\$ 13.42
23640 Millwright	\$ 16.23
23700 Office Appliance Repairer	\$ 15.67
23740 Painter, Aircraft	\$ 15.67
23760 Painter, Maintenance	\$ 15.67

23790 Pipefitter, Maintenance	\$ 16.61
23800 Plumber, Maintenance	\$ 15.67
23820 Pneudraulic Systems Mechanic	\$ 16.23
23850 Rigger	\$ 16.23
23870 Scale Mechanic	\$ 15.07
23890 Sheet-Metal Worker, Maintenance	\$ 16.23
23910 Small Engine Mechanic	\$ 15.07
23930 Telecommunications Mechanic I	\$ 16.23
23931 Telecommunications Mechanic II	\$ 16.76
23950 Telephone Lineman	\$ 16.23
23960 Welder, Combination, Maintenance	\$ 16.23
23965 Well Driller	\$ 16.23
23970 Woodcraft Worker	\$ 16.23
23980 Woodworker	\$ 13.96

Personal Needs Occupations:

24570 Child Care Attendant	\$ 9.08
24580 Child Care Center Clerk	\$ 8.28
24600 Chore Aide	\$ 7.54
24630 Homemaker	\$ 9.20

Plant and System Operation Occupations:

25010 Boiler Tender	\$ 16.23
25040 Sewage Plant Operator	\$ 15.67
25070 Stationary Engineer	\$ 16.23
25190 Ventilation Equipment Tender	\$ 13.42
25210 Water Treatment Plant Operator	\$ 15.67

Protective Service Occupations:

27004 Alarm Monitor	\$ 10.76
27006 Corrections Officer	\$ 14.53
27010 Court Security Officer	\$ 16.64
27040 Detention Officer	\$ 16.64
27070 Firefighter	\$ 17.64
27101 Guard I	\$ 6.92
27102 Guard II	\$ 11.20
27130 Police Officer	\$ 17.75

Stevedoring/Longshoremen Occupational Services:

28010 Blocker and Bracer	\$ 14.74
28020 Hatch Tender	\$ 14.74
28030 Line Handler	\$ 14.74
28040 Stevedore I	\$ 14.19
28050 Stevedore II	\$ 15.32

Technical Occupations:

29010 Air Traffic Control Specialist, Center 2/	\$ 23.45
29011 Air Traffic Control Specialist, Station 2/	\$ 16.17
29012 Air Traffic Control Specialist, Terminal 2/	\$ 17.81
29023 Archeological Technician I	\$ 12.15
29024 Archeological Technician II	\$ 13.61
29025 Archeological Technician III	\$ 16.84
29030 Cartographic Technician	\$ 16.84
29035 Computer Based Training (CBT) Specialist/Instructor	\$ 19.87
29040 Civil Engineering Technician	\$ 16.84
29061 Drafter I	\$ 10.50
29062 Drafter II	\$ 13.33
29063 Drafter III	\$ 16.02

29064 Drafter IV	\$ 20.56
29081 Engineering Technician I	\$ 13.12
29082 Engineering Technician II	\$ 14.74
29083 Engineering Technician III	\$ 17.13
29084 Engineering Technician IV	\$ 19.58
29085 Engineering Technician V	\$ 22.43
29086 Engineering Technician VI	\$ 27.12
29090 Environmental Technician	\$ 16.84
29100 Flight Simulator/Instructor (Pilot)	\$ 23.05
29150 Graphic Artist	\$ 18.06
29160 Instructor	\$ 19.87
29210 Laboratory Technician	\$ 14.95
29240 Mathematical Technician	\$ 19.37
29361 Paralegal/Legal Assistant I	\$ 11.99
29362 Paralegal/Legal Assistant II	\$ 15.61
29363 Paralegal/Legal Assistant III	\$ 18.47
29364 Paralegal/Legal Assistant IV	\$ 19.02
29390 Photooptics Technician	\$ 19.37
29480 Technical Writer	\$ 20.67
29491 Unexploded Ordnance Technician I	\$ 14.90
29492 Unexploded Ordnance Technician II	\$ 18.03
29493 Unexploded Ordnance Technician III	\$ 21.61
29494 Unexploded Safety Escort	\$ 14.90
29495 Unexploded Sweep Personnel	\$ 14.90
29620 Weather Observer, Senior 3/	\$ 15.64
29621 Weather Observer, Combined Upper Air & Surface Programs 3/	\$ 14.95
29622 Weather Observer, Upper Air 3/	\$ 14.95

Transportation/Mobile Equipment Operation Occups:

31030 Bus Driver	\$ 15.58
31260 Parking and Lot Attendant	\$ 8.05
31290 Shuttle Bus Driver	\$ 13.05
31300 Taxi Driver	\$ 9.59
31361 Truckdriver, Light Truck	\$ 13.05
31362 Truckdriver, Medium Truck	\$ 16.26
31363 Truckdriver, Heavy Truck	\$ 15.59
31364 Truckdriver, Tractor-Trailer	\$ 15.90

Miscellaneous Occupations:

99020 Animal Caretaker	\$ 9.06
99030 Cashier	\$ 6.69
99041 Carnival Equipment Operator	\$ 9.45
99042 Carnival Equipment Repairer	\$ 9.82
99043 Carnival Worker	\$ 8.05
99050 Desk Clerk	\$ 6.64
99095 Embalmer	\$ 16.96
99300 Lifeguard	\$ 5.91
99310 Mortician	\$ 16.96
99350 Park Attendant (Aide)	\$ 7.43
99400 Photofinishing Worker (Photo Lab Tech., Darkroom Tech)	\$ 5.91
99500 Recreation Specialist	\$ 12.18
99510 Recycling Worker	\$ 9.45
99610 Sales Clerk	\$ 5.91
99620 School Crossing Guard (Crosswalk Attendant)	\$ 8.05
99630 Sports Official	\$ 5.91
99658 Survey Party Chief (Chief of Party)	\$ 10.39
99659 Surveying Technician (Instr. Person/Surveyor Asst./Instr.)	\$ 8.65
99660 Surveying Aide	\$ 5.66
99690 Swimming Pool Operator	\$ 10.65
99720 Vending Machine Attendant	\$ 9.45
99730 Vending Machine Repairer	\$ 10.65

99740 Vending Machine Repairer Helper

\$ 9.45

**** Fringe Benefits Required For All Occupations Included In
This Wage Determination ****

HEALTH & WELFARE: \$1.39 per hour or \$55.60 per week or \$240.93 per month.

VACATION: 2 weeks paid vacation after 1 year of service with a contractor or successor; 3 weeks after 8 years; 4 weeks after 15 years; 5 weeks after 25 years. Length of service includes the whole span of continuous service with the present contractor or successor, wherever employed, and with the predecessor contractors in the performance of similar work at the same Federal facility. (Reg 4.173)

HOLIDAYS: Minimum of ten paid holidays per year: New Year's Day, Martin Luther King Jr.'s Birthday, Washington's Birthday, Memorial Day, Independence Day, Labor Day, Columbus Day, Veterans' Day, Thanksgiving Day, and Christmas Day. (A contractor may substitute for any of the named holidays another day off with pay in accordance with a plan communicated to the employees involved.) (See 29 CFR 4.174)

1/

Does not apply to employees employed in a bona fide executive, administrative, or professional capacity as defined and delineated in 29 CFR 541. (See 29 CFR 4.156)

2/

APPLICABLE TO AIR TRAFFIC CONTROLLERS ONLY - NIGHT DIFFERENTIAL: An employee is entitled to pay for all work performed between the hours of 6:00 P.M. and 6:00 A.M. at the rate of basic pay plus a night pay differential amounting to 10 percent of the rate of basic pay.

3/

WEATHER OBSERVERS - NIGHT PAY & SUNDAY PAY: If you work at night as part of a regular tour of duty, you will earn a night differential and receive an additional 10% of basic pay for any hours worked between 6pm and 6am. If you are a full-time employee (40 hours a week) and Sunday is part of your regularly scheduled workweek, you are paid at your rate of basic pay plus a Sunday premium of 25% of your basic rate for each hour of Sunday work which is not overtime (i.e. occasional work on Sunday outside the normal tour of duty is considered overtime work).

**** UNIFORM ALLOWANCE ****

If employees are required to wear uniforms in the performance of this contract (either by the terms of the Government contract, by the employer, by the state or local law, etc.), the cost of furnishing such uniforms and maintaining (by laundering or dry cleaning) such uniforms is an expense that may not be borne by an employee where such cost reduces the hourly rate below that

required by the wage determination. The Department of Labor will accept payment in accordance with the following standards as compliance:

The contractor or subcontractor is required to furnish all employees with an adequate number of uniforms without cost or to reimburse employees for the actual cost of the uniforms. In addition, where uniform cleaning and maintenance is made the responsibility of the employee, all contractors and subcontractors subject to this wage determination shall (in the absence of a bona fide collective bargaining agreement providing for a different amount, or the furnishing of contrary affirmative proof as to the actual cost), reimburse all employees for such cleaning and maintenance at a rate of \$4.25 per week (or \$.85 cents per day). However, in those instances where the uniforms furnished are made of "wash and wear" materials, may be routinely washed and dried with other personal garments, and do not require any special treatment such as dry cleaning, daily washing, or commercial laundering in order to meet the cleanliness or appearance standards set by the terms of the Government contract, by the contractor, by law, or by the nature of the work, there is no requirement that employees be reimbursed for uniform maintenance costs.

**** NOTES APPLYING TO THIS WAGE DETERMINATION ****

Source of Occupational Titles and Descriptions:

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**REQUEST FOR AUTHORIZATION OF ADDITIONAL CLASSIFICATION AND WAGE RATE
{Standard Form 1444 (SF 1444)}**

Conformance Process:

The contracting officer shall require that any class of service employee which is not listed herein and which is to be employed under the contract (i.e., the work to be performed is not performed by any classification listed in the wage determination), be classified by the contractor so as to provide a reasonable relationship (i.e., appropriate level of skill comparison) between such unlisted classifications and the classifications listed in the wage determination. Such conformed classes of employees shall be paid the monetary wages and furnished the fringe benefits as are determined. Such conforming process shall be initiated by the contractor prior to the performance of contract work by such unlisted class(es) of employees. The conformed classification, wage rate, and/or fringe benefits shall be retroactive to the commencement date of the contract. {See Section 4.6 (C) (vi)} When multiple wage determinations are included in a contract, a separate SF 1444 should be prepared for each wage determination to which a class(es) is to be conformed.

The process for preparing a conformance request is as follows:

- 1) When preparing the bid, the contractor identifies the need for a conformed occupation(s) and computes a proposed rate(s).
- 2) After contract award, the contractor prepares a written report listing in order proposed classification title(s), a Federal grade equivalency (FGE) for each proposed classification(s), job description(s), and rationale for proposed wage rate(s), including information regarding the agreement or disagreement of the authorized representative of the employees involved, or where there is no authorized representative, the employees themselves. This report should be submitted to the contracting officer no later than 30 days after such unlisted class(es) of employees performs any contract work.
- 3) The contracting officer reviews the proposed action and promptly submits a report of the action, together with the agency's recommendations and pertinent information including the position of the contractor and the employees, to the Wage and Hour Division, Employment Standards Administration, U.S. Department of Labor, for review. (See section 4.6(b)(2) of Regulations 29 CFR Part 4).
- 4) Within 30 days of receipt, the Wage and Hour Division approves, modifies, or disapproves the action via transmittal to the agency contracting officer, or notifies the contracting officer that additional time will be required to process the request.
- 5) The contracting officer transmits the Wage and Hour decision to the contractor.
- 6) The contractor informs the affected employees.

Information required by the Regulations must be submitted on SF 1444 or bond paper.

When preparing a conformance request, the "Service Contract Act Directory of Occupations" (the Directory) should be used to compare job definitions to insure that duties requested are not performed by a classification already listed in the wage determination. Remember, it is not the job title, but the required tasks that determine whether a class is included in an established wage determination. Conformances may not be used to artificially split, combine, or subdivide classifications listed in the wage determination.

PROPERTY

I. CONTRACTOR ACQUIRED EQUIPMENT

None

II. GOVERNMENT FURNISHED PROPERTY

1. Standard office equipment that will enable office workers at the Morgantown and Pittsburgh sites to perform their duties in an effective and efficient manner. (includes desks, computer tables, chair(s), bookcase(s), filing cabinet(s), computers and a limited number of calculators; computers are pentium computers with access to a laser network or personal printer)
2. Tools, software and equipment required to perform assigned tasks consistent with the standards for information technology work performed in an office and non-office environments.

NOTE: A detailed list of Government Furnished Property will be provided and verified by the contractor during transition. The detailed list will be incorporated into the contract.

FETC COMPUTING ENVIRONMENT

The following documents are included as Attachment J:

- (1) FETC Commercial Software Applications
- (2) FETC Information Systems
- (3) FETC-Pittsburgh Computer Facility Platforms and Operating Systems
- (4) FETC-Morgantown Computer Facility Platforms and Operating Systems
- (5) FETC Telephone Hardware

FETC COMMERCIAL SOFTWARE APPLICATIONS

APPLICATION/SYSTEM	SOFTWARE PUBLISHER	PRODUCT TYPE	USED BY (DIVISION OR GROUP)	DESCRIPTION OR COMMENTS
@Risk for Excel, 123, Project Access; Access Developer	Palisade Corp	Risk analysis		Simulation modeling
Acrobat Pro & Acrobat Reader	Microsoft	Database		
ACT!	Adobe			
Advantage Xbase	Symantec			
Alchemy 3 for Mac		Audio		
AmiPro	Lotus			
ANSYS; ANSYS Linear; ANSYS Thermal	Mallett Software			
Anti-Virus for Users	Norman	Utilities		
AppMeter	Funk Software	Utilities		Metering software.
ArcCad	Cheyenne			
ArcInfo	Cheyenne			
ArcServe utilities	Cheyenne	Utilities		Back-up & restore utility for the LAN. Uses a Btrieve database.
ArcView GIS	ESRI, Inc.			
AutoCad; AutoCad 386; AutoCad AME; AutoCad Lite	Autodesk Retail			
AutoEDMS	ACS Software Inc.	Document mgmt & workflow	Drawing Group	Tracks autocad drawings and revisions.
Borland C++	Inprise Corp.			
Btrieve	Pervasive	Database engine		
CCH Electronic Library	Commerce Clearing House	Regs	Legal and AAD	
Checkit	Touchstone Corp			
Close-Up Host & Remote	Norton-Lambert Corp	Comm		Used for PADS reports w/ HQ.
COBOL Developer Suite	MicroFocus			
CompaRite				Used to compare Clean Coal documents.
CorelDraw	Corel	Graphics		
Cornerstone Software				
Crane Companion Professional, The				
Cronjr				
Crystal Reports Professional; Crystal Reports for visual Basic	Seagate	DB repts		
Cumulus Network	Canto Software			Media management system
Datatrieve		Developer		
DAZzle Designer Plus	Envelope Manager Software	Graphics		For creating business reply envelopes.
dBASE IV; dBASE Editor	Borland	Database		
Debabelizer for MAC; Debabelizer Pro		Graphics		Used to convert graphic files for use in other applications
DecisionPro	Octel Comm Corp (Lucent Tech)	Voicemail		Voice mail server.
Delphi Client/Server Suite; Delphi Developer; Delphi Professional	Inprise Corp (was Borland)	Database		
DesignCAD Pro 2000	ViaGrafix	Graphics		Graphical drawings & symbols.
Developer's Suite for Netware	Apiary	Developer		Used to create NetWare-enabled applications.
Director; Director for MAC	Macromedia	Multimedia		Used to produce interactive programs for use on CD-ROM or web
DiscDupe AutoPro				
DiscView Pro SmartLaunch	Microtest	Utilities		
DiskMan for Windows	DiskMaster Software	Shareware		Disk label and cataloging software
Easy CD Pro	Incat Systems	Multimedia		Used to produce interactive programs for use on CD-ROM or web
ECPro	Expert Choice Inc.			Decision support software
EPI Code	Homann Associates			Emergency prediction information for pre-fire planning
Erwin	LogicWorks		Software Engineering	
Excel	Microsoft	Spreadsh		

APPLICATION/SYSTEM	SOFTWARE PUBLISHER	PRODUCT TYPE	BY (DIVISION OR GROUP)	DESCRIPTION OR COMMENTS
Extreme 3D		Graphics		Animation for video, multimedia & web
FARA for Windows	Compusearch Software Systems	Regs	AAD	4 databases (FAR, DEAR, DOE AR, FPMR)
Fast Forms				
Fastwire II				
Filemaker Pro	Claris	Database		Publishes live databases to the Internet, translates Excel into a DB.
Firebreak w/ Utilities for Servers	Norman	Utilities	IRMD	
FixOneHalf		Utilities	IRMD	Anti-virus software
FORTTRAN		Developer	Software Engineering	
FreeHand	Macromedia	Graphics		
FrontPage	Microsoft	Web		Used to prepare Internet / Intranet web pages
FTP	Novell			
FTP Client for Windows (WS_FTP)	John A. Junod (Ipswitch Inc.)	Comm		MGN Internet group
Fusion	NetObjects			
Ghost Professional Multi-Access	Innovative Software	Utilities		Used to deploy workstation images from the network to individual workstations.
Grandmaster	Omnicom?			Tracking system for site security keys.
Graph Autoconversion	Microsoft	Utilities		
Graphics Viewer	Microsoft	Utilities		
Graphicslink	Genigraphics	Graphics		
GroupWise	Novell	Comm	FETC-wide	Migration to v5.5 upcoming.
HEAT for Windows	Bendata	Utilities	InfoDesk	Separate database for each site; both maintained at PGH.
Hijaak Graphics Suite; Hijaak Pro	Quarterdeck	Graphics		
Illustrator	Adobe	Graphics		
Image Ready	Adobe			
Imagestream				Permits import of AutoCad drawings into MS Office documents.
Intellicad	Visio Corp			
Intelligent Consensus	Teams Inc.			360o appraisal system & other surveys.
Internet Explorer	Microsoft	Browser		Web browser.
JBuilder Professional	Inprise Corp.		Software Engineering	
JMP Statistical Software		Statistical		Statistical software for projects.
Jumbo Tape Backup	Colorado Memory	Utilities		
Kanji OCR	Pacific Software Publishing			Needed for travel to Japan.
Labview				
LAN Automatic Inventory	Brightworks	Utilities		
LAN Manager		Utilities		
LAN WorkPlace	Novell	Utilities	IRMD	TCP stack at MGN; collection of utilities.
LanDesk	Intel	Utilities	IRMD	LAN management
Lanspool	LAN Systems Inc.			
Lexis-Nexis	Lexis-Nexis	On-line service	Legal	Law, news, financial & public records.
Linux; Extreme Linux	Red Hat Software	OS	Project	
List	Buerg Software			
Lotus 1-2-3 for Windows	Lotus	Spreadsh		
Lotus Notes Desktop	Lotus		BMIS	
Mac Operating System	Apple Computers	OS	Graphics	
Mathcad Plus; Mathcad Professional; Professional NT	MathSoft			
Means Data	Means Southern			--
MediaMogul for MAC		Multimedia		Used to produce interactive programs for use on CD-ROM or web

APPLICATION/SYSTEM	SOFTWARE PUBLISHER	PRODUCT TYPE	Y (DIVISION OR GROUP)	DESCRIPTION OR COMMENTS
MeetingPro for Windows	Peopleware	Database	CONF	Used for conference planning, mailing labels, etc.
Metric-X	Orion Development Corp.	Misc		Does metric conversions.
Monarch	Datawatch	Reports	AAD	Used for PADS reports.
Multimedia Toolbook		Multimedia		Used to produce interactive programs for use on CD-ROM or web
Netscape	Netscape	Browser	Finance	Required by BEFS.
Netware Application Launcher for Win95	Novell	Utilities	IRMD	
Netware utilities	Novell	Utilities		
Network Assistant	Microsoft	Utilities		
Norman Virus Control Command Line Scanner	Norman	Utilities	IRMD	
Notify for Windows	Novell	Comm		
NS Open/Reflection	WRQ	Comm		
Occupational Health Manager (OHM)	Unique Software Solutions	Database	Medical	Maintains employee medical records; tracks physicals, encounters, exposures, patient scheduling
Office Professional Developer's Edition	Microsoft	Suite	Software Engineering	
Office Standard; Office Professional	Microsoft	Suite		
OmniForm	Caere Corp			
OmniPage Pro	Caere Corp	OCR	Graphics	
OPTIMAS			OS&T lab	Image processing/analysis. Upgrade from 6.0
Oracle Forms	Oracle			
Origin	Microcal Software	Analysis		Used for research & data information.
PageMaker	Adobe	Graphics		Desktop publishing - brochures, flyers, etc.
PageMaker	Aldus	Graphics		
Paint	Microsoft			
Paint Shop Pro	Jasc Software	Graphics		
PaperPort Deluxe	Visioneer	OCR		Scanner software
Paradigm Plus	Platinum Technology		Software Engineering	Modeling tool.
Paradox for Windows	Borland	Database		
Paragon	NemaSoft Inc			
Paragon 555	Intelligent Solutions			
Partition Magic				
PC Consultants Diagnostics		Utilities		
PC Tools; PC Tools Anti-virus	Central Point Software	Utilities		
PC/TCP		Comm		Internet winsock
pcANYWHERE 32	Symantec	Comm		Dial-in access to LAN.
PC-Xware	Network Computing			
PeopleSoft Federal HRMS	PeopleSoft Inc		Human Resources	Maintains all human resource aspects associated with applicants & employees. Interacts with HQ PAY/PERS system.
Perform PRO Plus and Perform PRO Plus Form Filler	JetForm (was Delrina)	Forms		Licenses converted/upgraded to FormFlow 2.15
Persuasion	Adobe	Graphics		Used to prepare presentations for site use
PGP for Win 95	Network Associates	Encryption		
Photoshop	Adobe			Photo manipulation.
Phototools				
Pizzaz		Printer software		
PKWARE; PKZip for Windows	PKWARE	Utilities		
PostScript Renderer	Jasc Software	Import Filter		
PowerPoint	Microsoft	Graphics		Presentations
Premiere	Adobe	Video		--
PRO OCR100	Visioneer	OCR		Scanner software
ProcessSuite Client	Moore Products Co.			Used on the PDU project.
ProCite				On stand-alone research computer.

APPLICATION/SYSTEM	SOFTWARE PUBLISHER	PRODUCT TYPE	(DIVISION OR GROUP)	DESCRIPTION OR COMMENTS
Programmer/Developer 2000 (PRO C)	Oracle		Software Engineering	
Project	Microsoft	Proj mgt		
ProTRAX	TRAX Corp	Engineering		
PVCS Tracker; PVCS Version Manager	MicroFocus (was Intersolv)	Utilities	Software Engineering	Configuration management.
Q Series Automation Software	EOS Intl.		Library	References searches.
QEMM	Quarterdeck			
Quadbase-SQL	Quadbase Systems			
QuarkXPress	Quark Inc.	Graphics	Graphics	
Query	Microsoft	Utilities		
Quick Basic	Microsoft			
Quick C	Microsoft			
RealAudio Player	RealNetworks			
RealServer for NT	RealNetworks			
Real-Time Graphics Tools				
Reflection for HP w/NSVT	WRQ Inc.	Comm		
RetrievalWare	Excalibur Technologies	Retrieval		
Right Writer	Rightsoft, Inc.	Wd Proc		
RSLogix 500 Programming Software				
Sidekick	47th Street Photo			
Sideways	47th Street Photo			
Slide Service	Autographix	Graphics		
SmartDraw	SmartDraw	Graphics	IRMD	
SmarTerm 32-Bit Edition for Windows 95	Persoft	Comm		Required for access to the VAX, etc.
SoundForge XP for PC		Audio		
SQL Server; SQL Client Access	Microsoft			
SQLBase Server NLM for Netware	Microsoft		Executive Office	Database on APACHE server for Contract Documents Imaging (CDIS)
Statistica	Statsoft Inc			"Quick Statistica" per p.o.
Stickies!	Looking Glass Technologies	Misc		Notes management system.
Stockroom Inventory Manager	Certified Management Software	Database	AAD	Warehouse inventory.
Streamline	Adobe			
SysMeter	Microsoft	Utilities		A system resource monitor.
TCP Connection				
TCP/IP	Microsoft	Comm		Internet winsock
Team Developer	Centura Software		Software Engineering	
Thermospec	Thermo Jarrell Ash Corp			
TMS for Windows - LAN version	Four Rivers Software Sys.	Database	Site Operations	Facilities maintenance & inventory mgmt system.
TopDesk (Windows 3.x)	Microsoft	Utilities		
Travel Manager	Gelco	Travel		DOE authorizations & vouchers.
UnInstaller	CyberMedia (formerly MicroHelp)	Utilities		
Visio Standard, Technical, Professional	Visio Corp	Graphics		
Visual Basic	Microsoft	Database		
Visual C++	Microsoft			
Visual Fortran Professional	Digital			Upgrade from MS Fortran Power-Station; used w/ PC-TRAX.
Visual FoxPro	Microsoft	Database		
Visual Studio	Microsoft			Includes Visual J++
Windows	Microsoft	OS		
Windows NT Server/Client, Workstation	Microsoft	Server		
Windows Smartdrive Monitor	Microsoft	Utilities		
WinImage		Shareware		Disk imaging software
Winsock	Trumpet Software Intl	Utilities		TCP stack at PGH; Internet winsock
Winview	Citrix			
WinWedge Pro				
WinZip	Niko Mak Computing	Utilities		

APPLICATION/SYSTEM	SOFTWARE PUBLISHER	PRODUCT TYPE	DEPT. (DIVISION OR GROUP)	DESCRIPTION OR COMMENTS
Wise Installation System	Great Lakes Business Solutions	Utilities		For network installations & admin.
WordPerfect	Corel	Wd Proc	Office Mgrs	
Wordscan Plus	Calera	Graphics		
Wusage	Boutell.Com	Utilities		Monitors usage on web servers
xRes		Graphics		Used to convert graphic files for use in other applications
Z.E.N.works	Novell		IRMD	

FETC INFORMATION SYSTEMS

SYSTEM	DESCRIPTION OR COMMENTS	DIVISION	CURRENT PLATFORM	CURRENT DATABASE TYPE	LIFE CYCLE STAGE
Assessments	Inspections tracking status.	EH&S	WIN	Oracle	Development
Archives Maintenance System	Logs Records Holding Area Contents	Records	WIN	dBase IV	Maintenance
Award Closeout System	Tracks awards in closeout status	PROC	WIN	MS Access 2.0	Maintenance
Business Cards (BC)	General contact information about outside vendors and business contacts.	Off Mgrs	DOS	dBase III	Retiring
Conditional Assessment Information System (CAIS)/ Capital Asset System (CAS)	Inventory and assessment of facility equipment and it's working condition.	Site Operations	WIN	Oracle	Maintenance
Capital Asset Mgmt. Process (CAMP)	Tracks capital assets uses, maintenance, and management	EH&S			Maintenance
CARS	Vehicle Maintenance System	Property	WIN	dBase IV	Maintenance
CDIS	Contract Documents Imaging System	MPD	WIN	SQLBase	Maintenance
Chemical Inventory	Will be replaced with new Chem Mgmt System; Chemical Inventory	OST	WIN	dBase V	Maintenance
Chemical Management System	Will be replaced with new Chem Mgmt System; Offers chemical management, inventory, material safety tracking.	IH	DOS/WIN	AREV & MS Access 2.0	Maintenance
COAL	Coal Technology Database		VMS	Oracle	Maintenance
COOPS	Conduct of Operations	OST	WIN	Oracle	Maintenance
CORE	Tracks employee name, location, etc for phone book and accountability lists.		WIN	Oracle	Implementation
CPS	Commercial Payments System	FIN	HP	Powerhouse	Maintenance
CSS	Construction Specifications	EH&S	WIN	Oracle	Maintenance
DACS - Mission Critical	Data Acquisition & Control Systems	Projects			Maintenance
Directors Office Tracking System (DOTS)	Tracks Action Items assigned by Director's Office.	Dir Off Off Mgrs	WIN	MS Access 2.0	Maintenance
DISCAS	Departmental accounting system	BFMD	MPE XL	TurboIMAGE/X L	Maintenance
DRS	Building Drawing Retrieval System	Drafting	WIN	Oracle	Maintenance
Employee Tracking System (ETS)	Tracks in-move-out processing of employees	SOD	WIN	MS Access 2.0	Maintenance
ERLE	Energy Related Laboratory Equipment	AAD	WIN	MS Access 2.0	Maintenance
ETA	Energy Time & Attendance	Timekeepers	DOS	Clipper	Maintenance
Fax Tracking System	Tracking of site incoming and outgoing faxes	FAX Off	WIN	MS Access 2.0	Maintenance
FIMS	Facilities Info Mgmt. System	Facilities	WIN	Oracle	Implementatin
FETC Information Tracking System (FITS)	Tracks contract deliverables.	AAD	WIN	Oracle	Implementatin
Fossil Research Energy Database (FRED)	FE projects fact sheet system.	MCD OPM	WIN	Lotus Notes	Maintenance
FETC Reporting Module (FRM)	Financial reporting.	BFMD	WIN	Oracle	Maintenance
Germantown Applications: BMIS, PADS, SCORS, VAMS, REAPS, PROFS...	File transfers set up from Germantown		Mainframe	IBM System 2000	
Grapvine (GRAPE)	Allows anonymous messages to be sent to a coordinator for response.	IRMD	DOS	.dbf	Maintenance
HANDBOOK	(Office Manager Handbook change management) This application is used by Office Managers to create and track requests for changes to the Office Manager Handbook.	Off Mgrs	DOS	dBase III	Maintenance
Library Journal Routing System	Prepares journal tracking lists	Library	WIN	Paradox	Maintenance
Mailstop	Track users to receive copies of particular Orders, Procedures, or Plans.	IRMD/DNA	DOS	dBase III	Maintenance
METC Corrective Action Tracking (MCATS)	Documents ES&H audit/assessment findings and corrective status	ESH/IRMD	DOS	Oracle	Retiring
METC Requisition/METC1	Storeroom personnel still use the system to track/process purchases	PROC	DOS	dBase III	Retiring
MPS	Maintenance Planning System	OST	WIN	Oracle	Maintenance

SYSTEM	DESCRIPTION OR COMMENTS	DIVISION	CURRENT PLATFORM	CURRENT DATABASE TYPE	LIFE CYCLE STAGE
MSA 6000 DAN - Mission Critical	Intellution FIX DMACS - Monitors toxic gas levels in 11 remote locations	ES&H	Windows		Maintenance
NEPA Document Tracking	Tracks status of NEPA projects	ES&H	DOS	dBase III	Maintenance
Netman	Maintains personal computer configurations and inventory of ADP equipment	IRMD	DOS	Proprietary	Retiring
PAMS	Property Admin & Mgmt System	Property	VMS	Oracle	Maintenance
Parking System	Tracks personal vehicle stickers	Security	WIN	MS Access 2.0	Maintenance
Procurement Statistics Summary	Tracks contract award costs	PROC	WIN	MS Access 2.0	Retiring
ProMIS	Project management information system.	OPM	WIN	MS SQL Server	Implementatin
RC Mail	Tracks registered and certified mail.	Mailroom	WIN	MS Access 2.0	Maintenance
RCDMGMT	Records management system.	IRMD	WIN	Oracle	Testing
Request for Initiation of Official Travel	Users prepare the request for initiation of official travel and electronically route the request	DOE FIN	DOS	dBase III	Retiring
RPS	Respiratory Protection System	EH&S	WIN	Sqlserver	Testing
Computer Based Training (CBT)	Generate and administer on-line computer-based training.	Training	WIN	Proprietary	Maintenance
Security Badging System	Tracks basic sensitive and non-sensitive employee information (other systems may access non-sensitive)	Security	WIN	Paradox	Maintenance
Site Calendar	Publishes a site calendar of activities for both sites	Dir Off	WIN	MS Access 2.0	Maintenance
Software Tracking	Tracks when, where and who has software that arrives onsite	IRMD	WIN	Paradox	Maintenance
SPS	Small Purchases System	AAD	WIN	Oracle	Maintenance
Telephone Maintenance System	Records Telephone Change Transactions	IRMD	WIN	Proprietary	Maintenance
Total Maintenance System (TMSWIN) 7.2	Facilities maintenance and inventory management system.	Site Ops	WIN	MS Access	Implementation
VMP	Ventilation Management Program	EH&S	WIN	Oracle	Maintenance
Waste Minimization	Track CISR forms; search for chemicals on site before purchase.	OST	WIN	dBase V	Retiring

FETC MORGANTOWN COMPUTER FACILITY

PLATFORMS AND OPERATING SYSTEMS

NAME	OPERATING SYSTEM	FUNCTION
UT	NetWare 4.11	Applications and Data Server
CO	NetWare 4.11	GroupWise, Utility, Intranet Server
VT	NetWare 4.11	Home Server
ID	NetWare 4.11	Home Server
MT	NetWare 4.1	Home Server
NV	NetWare 4.11	Home Server (Beta Deployment)
HI	NetWare 4.11	Alpha Test Server
SC	NetWare 4.11	Software Development Server
LN	OS/2 & Lotus Notes	FRED/BMIS Support Server
NIKE	DEC UNIX	CHRIS Server (Production) & Intranet Search Engine
AJAX	DEC UNIX	CHRIS Support, Software Development, RetrievalWare Server
XERXES	NT 4.0/Tuxedo	CHRIS Application Server
OEDIPUS	NT 4.0/Tuxedo	CHRIS Application Server
PROTEUS	NT 4.0/Domino	Intranet FRED Server
ARTEMIS	NT 4.0/Domino	Internet CDROM & RetrievalWare Server
DESCARTES	NT 4.0/SQL Server	Library Software System
GEMINI	NT 4.0/SQL Server	Client/Server Database Management Services
EOS	3270 Comm	Communication Server for SNA Connectivity to HQ
ALTAIR	DEC ULTRIX	UNIX Host, General User Access, X-Terminal Support and C/FORTRAN Compilers
RIGEL	DEC ULTRIX	UNIX Host, General User Access, X-Terminal Support and C/FORTRAN Compilers
TYPHON	Infoserver	CDROM Server (DEC Documentation)
ZEPHYR	DEC UNIX	Internet Mail and UseNet News Server, Primary DNS FETC
ZEUS	DEC UNIX	Primary DNS MGN.FETC, Secondary DNS for FETC, BOOTP
ALEPH	OpenVMS AXP	VMS Cluster Host, General-purpose Timesharing, Program Development and Graphics Libraries, Document Management Services, Scientific and Modeling
TN	OpenVMS VAX	VMS Cluster Host, General-purpose Timesharing, Program Development and Graphics Libraries, Scientific and Modeling
WV	OpenVMS VAX	VMS Cluster Host, General-purpose Timesharing, Communications Services, Database Management System Services, Program Development and Graphics Libraries, Document Management Services, Scientific and Modeling
APIS	DEC UNIX	FETC WWW, FTP, and Automated List Server
VULCAN	IRIX	Program Development and Graphics Libraries, Scientific Modeling
ALECTO	DEC UNIX	Internet Firewall
CLOTHO	DEC UNIX	Internet Firewall
DELPHI	DEC UNIX	DOEBN Firewall

FETC-PITTSBURGH COMPUTER FACILITY PLATFORMS AND OPERATING SYSTEMS

NAME	OPERATING SYSTEM	FUNCTION
NY	NetWare 4.11	Applications and Data Server
K2	NetWare 4.11	GroupWise, Utility, Intranet Server
OLYMPUS	NetWare 4.11	Home Server
EVEREST	NetWare 4.11	Home Server
MONS	NetWare 4.11	Home Server (Beta Deployment)
HOOD	NetWare 4.11	Travel Manager Server (Current Production)
DEVELOP	NetWare 4.11	Software Development Server
CCT-B	NetWare 4.11	Graphics Image Storage Server
APACHE	NetWare 4.11	CDIS Server and Data Storage
COPYCTR	NetWare 3.12	Xerox Docutech Printer Network Interface
LN	OS/2 & Lotus Notes	FRED/BMIS Support Server
PA	DEC VMS	Information Systems Server
REMUS	HP UX	Internet Firewall
VENUS	DEC Ultrix	Backup Internet DNS
ORION	DEC UNIX	Primary Internet DNS (PGH), BOOTP, Secondary DNS (FETC and PGH)
TITAN	SCO UNIX	FTP Server
JUPITER	SCO UNIX	FTP Server
SATURN	SCO UNIX	Oracle Systems Server (Production)
PLUTO	SCO UNIX	Oracle Systems Server (Test)
TERRA	SCO UNIX	Oracle Systems Server (Development)
SIGMA	NT	SQL Server Systems Server (Production)
TAU	NT	Travel Manger Server (Future Production)

FETC TELEPHONE HARDWARE

MODEL	TYPE	LINES	LOCATION	HANDSETS
Nortel 81C & 61C	PBX and remote sw	1000	Pittsburgh	Digital and Analog
Nortel 61C	PBX	750	Morgantown	Digital

NOTE: PBX HARDWARE AND SOFTWARE MAINTENANCE PROVIDED BY GSA.

Draft

FETC Enterprise Architecture Methodology

**Federal Energy Technology Center
United States Department of Energy**

May 20, 1999

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1 Introduction

This document describes the common approach that will be used by FETC in performing Enterprise Architecture (EA) tasks. The process should allow as much flexibility as possible while clearly defining the activities that are required for process discipline, consistency, and management insight.

1.1 Purpose

The idea is to standardize the approach and methodology that all personnel follow to ensure common terminology. This will enhance the virtual team approach allowing our contractors to work coherently as one.

1.2 Definitions

CM – Configuration Management
COTS – Commercial Off-the-Shelf
ERD – Entity Relationship Diagram
IAT – Information Architecture Team
IRM – Information Resource Management
NAL – Netware Application Launcher
UI – User Interface
UML – Unified Modeling Language

1.3 Overview

This document should be used as the policy that all FETC projects will follow.

2 Enterprise Architecture Methodology

Configuration Management (CM) proliferates throughout complete process. All aspects of the project will be captured using a CM tool. All project documentation will be maintained electronically utilizing PVCS Version Manager and PVCS Tracker from Intersolv.

2.1 Introduction

This document provides a summary of the engineering activities and models in the Hewlett-Packard (HP) Fusion 2.0 process. The engineering process is intended to use UML, however, most of the process is independent of notation. The process details the dependencies between models and thus might suggest that a project should adopt a waterfall process when using Fusion. This is not the case and projects are recommended to follow the evolutionary delivery principles explained in the companion management process for Fusion.

Throughout the process, techniques such as JAD workshop sessions and brainstorming may be useful to facilitate communication and creativity. Quality review techniques such as walk-throughs and inspections may also be used as required in the process.

The FETC Enterprise Architecture Methodology has 13 separate activities, explained in more detail in the following pages.

Enterprise IA Methodology

2.1.1 Project Initialization

The project initialization phase is used to screen/justify projects that enter into the Enterprise. This allows big picture analysis allowing for enterprise-wide systems. It also lends itself to project initialization planning and prioritizing all requested and ongoing projects.

2.1.2 Preliminary Project Plan

An initial project plan that provides estimates for completing the requirements and analysis phase of the project is required. These estimates are based on prior work experience.

2.1.3 Requirements

The requirements phase captures the user's requirements for the system in terms of *use cases*, *features*, and *non-functional requirements*. The output of the requirement phase includes a *use case diagram* and several *use case specifications*.

2.1.4 Analysis

The analysis phase defines *what* operations and objects will be present in the system to be delivered, without regard to *how* those operations and objects will be implemented. The output of the analysis phase includes the *system class diagram* and the *system interface*, defined in terms of *system operations* and *events*. The system class diagram is developed from the *domain class diagram*.

2.1.5 Build verses Buy

The decision to build verses buy is made based on whether the requirements defined are addressable by purchasing a COTS product.

2.1.6 Refined Project Plan

A revised project schedule is completed using more definitive times, tasks, and whether a COTS package will be acquired.

2.1.7 Architecture

The architecture phase identifies components of the system that handle coherent parts of the system. It defines the approach to concurrency and synchronization issues. The output of the architecture phase is an *architecture diagram* which defines the components, their interactions and the *component interfaces*. Architecture design is important for team organization and communication, as well as providing a technical framework.

2.1.8 Design

The design phase assigns operations to objects and makes decisions about inheritance, visibility, and the representation of associations. The outputs from the design phase are the *design class diagram*, *object collaboration diagrams* and *initial object configuration*.

2.1.9 Implementation

The implementation phase translates the design into code in some target programming language. In addition to method coding, it addresses issues of resource management and performance.

2.1.10 Deployment

This phase is used to develop the required documentation need to install and maintain the system in production.

2.1.11 Training

Training plans are developed in order to train the different classes of users of the system.

Enterprise IA Methodology

2.1.12 Maintenance

This phase is used to track on-going bugs/enhancements needed to keep the system running.

2.1.13 Retirement

This phase is used to track life usability of the system to determine if retirement is needed.

2.1.14 Supplementary Processes

2.1.14.1 GUI Design

The graphical user interface design phase is performed in parallel with other analysis and design work. It utilizes usability requirements, use cases and the analysis class diagram to identify the required graphical interface components and user interface navigation.

2.1.14.2 Database Design

Database design is concerned with meeting requirements for persistence of object state, and for multi-user access. If the system uses a database, there is a database design phase, which uses the design class diagram to design the database schema, and system operations to identify database transactions.

The GUI and Database processes are not as comprehensive as the other parts of the method; rather they link the ideas and concepts of the methodology into best practices in these areas. This is because both topics are large and complex and are well covered in existing books and methodologies.

In addition to the models, a *data dictionary* is created and utilized throughout the process as a reference for the actors, use cases, classes, associations, system operations, etc. developed from the requirements phase through the beginning of the implementation phase.

The following sections detail the steps and guidelines of the method. A diagram of the process follows.

2.2 Project Initiation

All requests will go through InfoDesk whose staff will request information specified in the Project Initiation Request Form. (Appendix 1)

Information is entered into the HEAT system and assigned to the IRM point of contact for approval.

Using the information supplied, the IRM POC does the following:

If information is not clear, the IRM POC contacts the Requestor for additional information.

Using PROJLIST, related projects are queried and reviewed. IRM POC should be looking for duplicate efforts on-going or similar requests from the past.

New Project is initialized and marked as "proposed".

Based on prior experience, a rough cost/benefit analysis is performed and the project is marked as "initiated" or "rejected". The InfoDesk is notified and updates HEAT.

The requestor is notified with reasons for rejection.

If initiated, a priority is established and the project is turned over to Enterprise Architecture Support Team Leader.

4. The EA Support Team Leader assigns resources and creates a project in PVCS.

2.3 Project Management

2.3.1 Select Business Domain Experts

This process is used to identify business domain experts in which to target the user interviews. This also ensures that all domain areas are covered to allow for an enterprise-wide solution.

2.3.2 Define Roles, Responsibilities, and Expectations

Defining the key roles, responsibilities, and expectation for the project in order to establish a common understanding of what needs to be performed to ensure a successful project kickoff is required.

2.4 Requirements

The starting point of the requirement phase is a System Requirements Specification (SRS) (See Appendix 2). A complete SRS should define the requirements for a system throughout its lifecycle, from product conception through system development, deployment, operation, maintenance, enhancement and obsolescence. Furthermore it is preferable that a SRS should also cover anticipated future releases of the system.

The requirements phase models requirements so that they can be used to drive the software development. The main output of the requirements phase are *use cases* capturing functional requirements, and *non-functional requirement specifications*. The aim of the requirement phase is to capture the desired behavior of the system in a manner that (1) forms the basis for software development, and (2) can be reviewed by the customer.

2.4.1 Perform User Interviews

A key to this process is to perform the user interviews with the appropriate number people per session and use the Interview and Guideline Questions in Appendix 3. Each session should have a primary interviewer. A secondary interviewer who's function is to script and capture key statements would be beneficial, if feasible. Once all the interviews are completed they are analyzed into high level functional and non-functional requirements.

2.4.2 Define High Level Functional and Non-Functional Requirements

Typically, a SRS is a large and very detailed document. The goal of this step is to make the information more manageable by structuring it into a smaller set of requirements at a high level of abstraction. These are formed by identifying and abstracting away from groups of detailed requirements which are associated with some aspect of the system. For example, high level requirements may relate to a behavior of a: *class of user*, e.g., customer, system manager, field engineer.
product feature, e.g., manual, automatic.

mode of operation, e.g., powered up, error recovery, installation.
lifecycle phase, e.g., development, operation, maintenance.

Some requirements are functional others are non-functional. Each functional high level requirement identifies a separate *functional area*. The non-functional requirements will cover a quality issue, e.g. FURPS (functionality, usability, reliability, performance, and supportability).

Each requirement is given a name and documented in a few natural language sentences. As far as possible, the description should provide an external view of the system and should avoid details of the internal workings of the system. Each requirement should be cross-referenced back to the appropriate matrix number and the key people or other information sources that led to need for the requirement.

The functional areas should be described at a high level of abstraction and in terms of the (business) processes and stakeholders involved. Non-functional requirements include *constraints* and *qualities*. Constraints are properties that apply to the system as a whole and may apply to the development process, e.g., time-to-market; or to the run-time, e.g., interoperability with legacy systems, or use of a particular operating system. Qualities include quality of service (QoS) attributes such as performance, reliability etc. They also include concepts such as usability, extensibility, and configurability.

2.4.3 System Functionality and Scale

Functional requirements are modeled in terms of actors and use cases. An actor is an external entity that uses or interacts directly with the system. Thus an actor can be a human user or another software or hardware system. A use case is a set of interactions between the system and one or more actors in order to achieve some specific goal. The purpose of a use case is to yield a result of measurable value to an actor in response to the initial request of that actor.

The goal of this step is to decompose each functional area identified in 2.4.2 into a set of use cases that define the main interactions of the system. In this step, each use case is given only a brief a description of its goal. The actors and use cases can be found by considering all the fundamentally different processes/actions in which the actors participate for each high level requirement. The non-functional requirements are reviewed to see if they can introduce new use cases. For example, run-time extensibility or configurability may be handled by introducing a functional area with use cases that show the process for extending or configuring the system.

The use cases and actors for the whole system are shown on one or more use case diagrams. A *Use Case Diagram* graphically summarizes use cases and actors. It shows interactions between the actors and the system. The actors are represented by "stick-figures", use cases by ovals, and connecting lines show participation. The use case diagrams depict all the different functionality's that a system possesses. It is also necessary to consider how much functionality the system will have to offer concurrently during its execution. This property, which is a non-functional requirement on the system, is sometimes called the *scale* of the system

The scale of the system at run-time is given by the numbers of actors and use case instances that the system has to handle concurrently. Scale information is appended to the use case diagram in free form text that documents:

- How the actor instance population changes over time (i.e., time distribution of concurrent users).
- How many use case instances can be active simultaneously.
- Priority ordering between simultaneous use case instances.
- Geographical distribution of actor and use case instances.

Scale is often expressed as a range giving the minimum and maximum values. Defining the scale of the system may cause revision of the non-functional requirements by making explicit previously unnoticed constraints on performance or reliability.

2.4.4 Relating Functional And Non-Functional Requirements

The goal of this step is to relate the functional and non-functional requirements. This information is recorded in a requirements matrix, which defines the non-functional requirements for each functional area. Requirements matrices can be used to make trade-offs between requirements and product releases.

In a *requirements matrix* the functional areas label the rows and the non-functional requirements label the columns. The matrix entries show the minimum and/or planned non-functional measure to be achieved by the corresponding functionality together with an assessment of the technical risk that the measure will not be achieved.

The level of precision in the table entries will vary. For example the reliability of a certain functional area may be stated simply as "high", or more precisely in terms of mean time to failure and mean time to repair. When precise measures are difficult to determine, develop *scenarios* that can be used to test these qualities. The scenarios should describe specific, expected demands on the system during development or operation and provide clear testable characterizations of the quality requirements. Some non-functional, such as security, are called safety properties because they "forbid bad things from happening". It is not possible to adequately ensure safety properties by test scenarios or use cases alone; they also require reasoned arguments.

The matrices may be used to trade-off the technical risk associated with a non-functional goal against the business risk of delaying delivery of the goal until a later product release. To do this it is necessary to indicate the top few priority and high risk entries as a requirement conflict resolution guide for use in later phases of the system development. The requirements matrices are an input into the EVO planning process used in managing projects.

2.4.5 Define Use Case Specifications

The role of a use case specifications is to explore and validate the functional areas in more detail. For each use case identified in 2.4.3, produce a specification, which defines the

- goal of the use case,
- assumptions made regarding the use case,
- actors involved,
- sequence of steps in the interaction between actors and the system,
- source of the information used to construct the use case
- non-functional requirements for the use case
- variants

The steps of a use case specification should be general and describe a class of interactions, rather than a specific interaction. However, a useful technique for finding use cases is to construct generalizations from instances represented by scenario diagrams, i.e., message sequence diagrams. The goal of the use case should be described declaratively. Free form natural language may be used to describe the steps of the use case. If there are important orderings of the interactions, these should be captured in the text. When describing the use case steps, it may be appropriate to include interactions between actors which do not involve the system, but help clarify the understanding of the system's usage. The granularity of interaction within a use case should be controlled to ensure that it is at a consistent level of abstraction.

The steps of a use case may include iterations and conditionals, which can be used to deal with variations and exception conditions that can occur during normal operation. In the interest of understandability the level of complexity should be kept low by focussing on the "straight-forward" case. Appropriate assumptions should be added to indicate those cases that are not covered by the steps. Any changes to the steps that are needed to deal with the assumption are included in the variants field or defined by extension use cases (see 2.4.6).

Use the non-functional requirements in the requirement matrix to refine the use-case specifications. Add appropriate non-functional requirements to each use case specification. Sometimes a non-functional

requirement can be met by adding extra system functionality, which changes the steps of a use case. For example, the performance requirement of a use case might be achieved by automating some functionality which allows an actor to operate more effectively.

In order to reduce redundancy the set of use cases should be examined as they are produced with a view to identifying commonality between use cases. This is covered in the next step of the process.

2.4.6 Structure Use Case Specifications

Because the use cases are derived from the functional areas developed in the first step of the requirements phase the use cases are naturally structured into related groups. Nevertheless the use cases may still require further structuring to make them manageable.

Shared common behavior may be extracted to form a *sub use case*. A sub use case is a well-formed use case that is documented by its own use case specification. The use case diagram should be modified to show each such *uses* relationship. The *uses* relationship allows the granularity of interaction to become more detailed as one passes down the hierarchy of use cases.

Variations dealing with complex exceptions are captured using the *extends* relationship. An extension documents the change to the use case steps which is necessary to discharge some unwanted assumption. The variation can be documented in the variations field of a use case template, or it can be described by a separate change delta use case specification. In this latter case the use case diagram should be modified to show the *extends* relationship.

The *uses* and *extends* relationship structure the set of use cases as a hierarchy. The goal of each top layer use cases relates to the business process in a functional area. The goals of lower level use cases are progressively more detailed. The bottom layer goals correspond to elementary business processes. Extension use cases form variations at each level in the hierarchy that deal with situations in which the use case assumptions may be false. The hierarchy corresponds directly to the "ship" concept introduced in (Cockburn 1997).

2.4.7 Review And Refine Requirements Models

All the requirements models should be reviewed by the stakeholders and refined. Issues captured during these reviews should be collected and tracked, just as like defects are tracked and resolved during implementation. Iteration through review and refinement should continue until an acceptably small number of issues remain that can be deferred to later stages of development.

2.5 Analysis

Analysis is about what a system does rather than how it does it. The purpose of the analysis phase is to describe the system in terms of behavior at its interface. The description is in terms of an analysis class diagram and a set of system operation specifications.

2.5.1 Develop The Domain Class Diagram

The purpose of the domain class diagram is to capture the concepts which exist in the problem (and system) domain by representing them as classes, attributes, and associations between classes. Concentrate on finding high level abstractions, rather than lower level ones.

Guidelines:

- If a class model already exists for the domain then use that as a starting point.
- Examine the use case specifications to find candidate classes and associations.
- Brainstorm a list of any further classes and associations that are needed to complete the description of the problem domain. Repeatedly refine the class diagram looking for:
 - Generalizations modeling the kind-of or is-a associations.

Aggregations modeling part of or has-a associations.
Attributes of classes.
Cardinalities of associations.

2.5.2 Analyze Use Cases To System Operations And Determine The System Interface

Analyze and refine use case specifications to identify system operations, output events and objects which are visible at the interface.

The steps of each use case specification are rephrased to make the interactions more precise. Wherever possible the behavior of the system is described in terms of responsibilities (a la CRC). A *responsibility* is a "piece of functionality" that the system has to perform, e.g., a change of state or test on state, or the transfer of data to or from an actor. The refinement process should ensure that:

Responsibilities that are similar should be clarified and either identified or distinguished.

Actions on the system (respectively by the system) are listed as system operations (respectively output events) and possibly given parameters. The responsibilities associated with each system operation should be recorded.

The sequential ordering of steps should be made explicit. Where there is concurrency, or potential concurrency, between steps this should also be made explicit. The ordering of interactions within a step may be left unspecified (i.e. potentially concurrent).

Naming should be consistent across all use cases.

Each use-case specification is amended to list the system operations, objects, and output events that it mentions.

The *system interface* is the set of system operations and output events that pass between the system and actors in its environment. It is formed by collecting the system operations and output events from all the use cases.

The level of granularity of the interface may be adjusted by combining or decomposing system operations and events. The parameters of system operations and events are finalized at this stage. System operations, events together with their associated responsibilities are entered in the data dictionary, cross-referenced with the use cases from which they are derived.

2.5.3 Develop the Analysis Class Diagram

The domain class diagram is refined to produce the analysis class diagram, which shows the classes and associations that are necessary to represent the state space of the system. The refinement is constructed by examining the use cases. Each potential object in a use case must belong to some class, association, or attribute type. Furthermore each parameter of a system operation or output event must be similarly representable on the analysis class diagram.

Classes in the domain class diagram, which are 'outside the system boundary', are excluded from the analysis class diagram. The analysis class diagram may filter or extend the domain class diagram in various ways, (and is equivalent to the System Object Model in Classic Fusion).

Classes on the analysis class diagram are often high-level abstractions that later become the basis for architectural components.

In UML, an object diagram is a class diagram that contains only instances, i.e., objects and data values. It is convenient, therefore, to define a (composite) class that models the state space of the system. An object diagram showing an instance of the system class can then represent a snapshot of the state of the system at some point in time.

2.5.4 Develop the System Operation and Event Specifications

The semantics of each system operation is specified by a system operation specification. Note that if the system has been architected into components then this step will apply to the component (i.e., internal) system operations and events.

Using the associated responsibilities specify each system operation and event in terms of its precondition and post condition, the objects, attributes and links it reads and changes, and the events it sends. Following UML, pre-and post conditions can be represented as in-variants on the composite representing the system.

During analysis, all operations are presumed to be atomic, that is, they happen 'instantaneously' and do not interfere one with another. Interference due to concurrency are handled during the architecture and design phases.

Note that events only need specification if they have parameters which can return values, i.e., if they correspond to synchronous method invocations. In Classic Fusion events could not return values in parameters.

2.5.5 Review The Analysis Models

These checks are not complete but provide just enough criteria for establishing that the analysis is complete.

- Consistency between the use cases and the analysis models. Desk check consistency between use cases and specifications. Choose representative examples of scenarios from each use case. Define expected state change cause by each scenario. Then execute the scenarios, using the specifications to define the behavior of each system operation. Ensure that the results are the same.

- Consistency between system operation specification and the analysis class diagram.

- All objects, associations or parameter values mentioned in an operation specification must be represented in the analysis class diagram. Operation specifications must preserve analysis class diagram invariant constraints. If there is an invariant concerning an association or class, then any operation that can change them must respect the invariant in its specification.

2.6 Build verses Buy

A market analysis will be performed to check if a COTS exist. Commercial vendors and other federal agencies are contacted. A list of all agencies contacted, phone number, POC, and other notes are maintained. Demos of potential COTS solutions are requested, received, and reviewed. COTS packages are passed by Computer Operations/ Network Support to ensure the product will be compatible with current and future environment. If the COTS package meets >80 percent of the requirements, it will be considered acceptable. Costs for full implementation of the COTS package are weighed against development costs.

2.7 Architecture

An *architecture* specifies a system in terms components and their interconnections. The architecture phase produces architectural descriptions at two different levels of abstraction. A *conceptual architecture* which describes the system in terms of component collaborations which are expressed informally and at a high level of abstraction. The primary deliverable is a *logical architecture*, which specifies the component collaborations in terms of messages.

In the logical architectural components are specified in the same way as a system, i.e., an analysis class diagram, and an interface consisting of a set of operation specifications and events. Consequently the *architectural phase can be applied recursively* to produce an architectural design at any desired level of granularity.

Fusion architectural components map naturally to UML subsystems. A UML *subsystem* is a package which can be given a behavioral specification, may participate in associations, and may be instantiable and generalisable.

Note that UML *components* are inappropriate for architectural descriptions because they model implementation level entities such as executables and source code modules.

2.7.1 Review And Select Applicable Architectural Styles

An architectural style defines a family of systems in terms of a pattern of structural organization. More specifically, an architectural style determines a vocabulary of components and connectors that can be used in instances of that style, together with a set of constraints on how they can be combined. Standard styles include layers, pipe-and-filter, blackboard and micro kernel. The style of the architecture of a specific system is likely to be a hybrid of standard styles.

Review applicable architectural styles for the domain of concern and create a coherent architectural style by composing and refining pre-existing styles. The architectural style will constrain the decisions made in the subsequent steps of the process. A key criterion for evaluating architectural styles is satisfaction of the non-functional and scale requirements identified in the Requirements phase.

2.7.2 Informal Design Of The Architecture

In this step, the chosen architectural style is used as the basis for a first cut at the architecture. If no architectural style was chosen in 2.7.1, then complete this step and then revisit 2.7.1 to make the architectural style explicit.

At this stage, the description is informal and serves primarily as a starting point for the more detailed explorations of the later phases of the architectural process. The description should record

- the components and their responsibilities, including a rationale for the choice. Enter the information into the data dictionary
- the dynamic behavior of the architecture. Use diagrams to show the behavior in terms of dataflows or events passing between components. Informal box and arrow diagrams may be better than a formal notation.
- a (tentative) overview of the system as an *architecture diagram*¹ showing components and links.

Avoid detail and concentrate on architectural invariants and mechanisms. Identify areas of technical difficulty or high risk in the architecture, so that these can be explored more thoroughly later.

Guidelines:

- Candidate components may be found by subsetting the analysis class diagram. Look for classes that are internally cohesive and loosely coupled externally with respect to associations, e.g., composites
- Specialized components may be needed to support non-functional requirements, e.g., an authentication server to provide security.
- Review existing reusable libraries, and existing systems, to see if useful components already exist. Such *reusable* or *legacy components* can be used in the design process with their interfaces 'as-is' or modified, (e.g., using a wrapper).
- If use cases require the system to interact with human users, then a user interface component will be needed and should be designed according to the GUI design process.
- Candidate components may also be introduced to support clusters of related responsibilities or system operations, for example those associated with a requirements feature.
- If data needs to be shared between many use cases that are not temporally co-incident, then it must be determined if the data must be saved across invocations of the system using a database

¹ In UML terms, an architecture diagram is a collaboration diagram which provides the context for the set of collaborations between the components.

component or just within a single run of the system using a data structure. The database component should be designed using the Database design process.

2.7.3 Develop The Conceptual Architecture

The conceptual architecture describes the architecture much more rigorously and precisely. The aim is to validate and refine the architecture by exploring in more detail how components collaborate to satisfy the requirements. The increased precision should be directed at areas of highest risk or difficulty identified in 2.7.2.

This step focuses on how the components interact in order to satisfy the requirements. *Component collaboration diagrams*, which document end-to-end behavior of the architecture, are constructed for possible scenarios of use. The links in a collaboration graph may be annotated with *sequencing information*, i.e., the order in which the collaborations occur; *data flows* that occur as part of the collaboration; and *create* or *delete* which denote component creation and deletion.

The links do not show messages unless they are already known, as for example with legacy components. Neither do they show *directionality* of the collaboration, i.e., which component initiates the collaboration. These aspects of collaborations are dealt with later.

Developing each scenario collaboration diagram may refine and develop the architecture by adding or deleting components, component responsibilities or component collaborations. The architecture is validated by ensuring that each component in a collaboration diagram appears in the architecture diagram, and each component collaboration is supported by a link between components.

Scenarios may be derived from use cases, or if a more precise understanding of architectural behavior is required from the pre- and post-conditions for individual system operations. Design alternatives, for example to meet the non-functional requirements, can be explored and evaluated by developing different collaboration diagrams. Sufficient scenarios should be explored to ensure that all components and collaborations have been discovered, and the architecture can support the requirements.

Finally, it is important to develop a collaboration diagram that shows the start-up and initialization procedure for the architecture.

Guidelines:

The architectural design process may reveal inconsistencies in style between use cases that can cause an unnecessarily baroque architecture. It is usually desirable to make the use cases less idiosyncratic in order to produce a cleaner architecture. These use cases supersede analysis use cases and must be documented and rechecked with the customer.

Components that are created and destroyed dynamically are often needed in architectures that have to support use cases with many concurrently active instances.

2.7.4 Develop the Logical Architecture

In this step the architecture is refined by realizing the component collaborations as messages. The refinement requires holistic view in which the decisions made for one collaboration are considered in the light of their potential effect on components and collaborations. Thus the first step is to establish relevant architectural principles, mechanisms and/or patterns to guide the refinement.²

The collaboration graphs are considered in turn according to a priority determined by architectural risk, real-time constraints and all the non-functional requirements. Using the architectural principles that have been established, examine each collaboration and decide:

² An example could be that a server component involved in a particularly heavy collaboration will notify its collaborators of a change of state, rather than being polled.

whether the collaboration is mapped to a operation or a sequence of operations. (cf. mapping use cases to system operations) The operations on components are referred to as *component system operations*.

directionality, i.e., which component *initiates* the operation.³

- whether the operation is *synchronous*, *asynchronous* or *unspecified* (i.e., the decision can be left until the Design phase.

The directionality of the communication implies that the sender holds a reference to the caller. UML supports five kinds of visibility

Association: this is a permanent reference that is held in an attribute.

Parameter: the reference is passed as a parameter of an operation.

Local: the reference is held in a local variable of an operation.

Global visibility: the reference is globally visible.

Self: reference to self.

This information can be shown on the architecture diagram by attaching the appropriate navigability stereotype to the link, i.e. <<association>>, <<parameter>>, <<local>>, <<global>>, or <<self>>.

If necessary, develop further the collaboration diagrams to explore the behavior of the architecture. In order to evaluate how the architecture can meet time-critical requirements, such as throughput, UML *sequence diagrams* may be used to explore the length and complexity of end-to-end interactions through the architecture.

The pre- and post-conditions and the corresponding collaboration diagrams should be examined to consider whether it is possible for there to be simultaneous read/write access to a component. If so, access to the component may need synchronization and this should be added to the component specification.

As each component system operation is introduced its responsibilities should be recorded and it may be given a pre-and post-condition specification as in the Analysis phase. The objects referred to in the results and assumes clauses must appear in the class diagram for the component.

To summarize, a logical architecture is specified by:

An architecture diagram.

A set of collaboration diagrams showing message flows.

For each component: a specification documenting the component's interface (each component system operation is specified by a pre- and post-condition, as in the analysis phase); an analysis class diagram a list of responsibilities and the underlying rationale; whether it is dynamically created and deleted' and whether it may require mutual exclusion.

Guidelines:

Asynchronous vs. Synchronous Communication

Asynchronous communication between components should be introduced in order to allow time consuming computations to be performed "off-line" by another process or thread. This is particularly important when maximum responsiveness is required in interacting with actors. Other reasons for making interactions asynchronous include: (1) interaction with a resource component, i.e. a server that can receive requests from multiple clients; (2) handling operations from the environment that are not constrained to appear in any particular order; (3) when the client does not care when the required operation gets done. An asynchronous operation is a "one way send", as it cannot receive a result. Thus introducing asynchronous communication can affect interfaces because there must be an event to transmit the results back.

Interfaces

Consider whether each component needs a *real* interface. A component with a real interface can enforce encapsulation by ensuring that its internal components are only accessed via that interface. Alternatively a component can be treated as a white box that acts solely as an operational grouping of lower level

³ Directionality and flow of data can be in opposite directions, e.g., when a component returns a result.

components. In this case its interface is virtual, its internal structure is freely accessible to the environment and its interface is the union of all its internal component interfaces.

A component intended as a unit of implementation or distribution, should have a real interface.

If a component is instantiable then it will have a real interface.

If the interface of a component is essentially equivalent to the union of the interfaces of its components, then it may be preferable give the component a virtual interface.

Decide whether two components can be merged. It may be desirable to merge two components if they are tightly bound to each other, have little functionality of their own and collaborate with very few other components.

Precision

The level of precision in describing component interfaces may vary depending on the nature of the project: Leaving some component interfaces only partially specified is appropriate for smaller-scale systems developed by small co-located teams. The complete details of the interfaces can be captured bottom-up, during the design of the components themselves. Of course, completing the design of the architecture in this case relies on good communication and disciplined attention to the component interfaces during design.

Fuller and more precise interface specifications are more important when:

- the components will be developed by teams that are geographically or organizationally distributed (e.g., the development of the component is to be out-sourced).

- the components are units of distribution, plug-and-play interoperability and/or reuse.

- complex forms of concurrency need to be addressed, especially in dealing with real-time constraints.

2.7.5 Rationalize The Architecture

Assess whether the proposed architecture can satisfy the quality requirements and any other non-functional requirements. Apply the measures and test scenarios that were developed in 2.4.7 of the Requirements phase, and ensure that the architecture meets these requirements. Identify architectural risks, e.g. points where performance is critical. These are candidates for early architectural prototyping.

Consider the architecture against these criteria:

- Does each component have clearly defined responsibilities? Are there components with a surprisingly large number of interactions? If so, they may need to be merged and re-analyzed.
- Are there risks of deadlock or races?

- Are the pre- and post-condition specifications of each system operation satisfied by the architectural collaborations? If not, the architecture does not meet its functional requirements.

- Check whether the architecture can be mapped to the intended physical architecture. Allocate components to logical processors in the expected execution environment and check interaction path lengths for the scenarios used in constructing the architecture.

2.7.6 Form Design Guidelines

Before entering the design phase it is necessary to establish any principles that must be adhered to by the designers. The guidelines provide for consistent design approaches across the system such as preferred communication mechanisms, security policies and error and exception handling. For example, a design guideline might require all system critical inter-component operations to return a Boolean value indicating whether the method was successfully invoked.

2.8 Design

The outputs from the design phase are a *design class diagram*, and *object collaboration diagrams*. During design, object-oriented structures are introduced to satisfy the abstract definitions produced from analysis and architecture. The design is in terms of *design* objects that are instances of *design classes*. Unlike an analysis class, a design class can have operations associated with it, and possibly additional attributes.

2.8.1 Form The Initial Design Class Diagram

The *design class diagram* shows the classes that are used during the design phase of a component. An initial working version may be made by copying the analysis class diagram for the component.

2.8.2 Construct Object Collaboration Diagrams

The purpose of this step is to define object-oriented algorithms that satisfy the analysis specifications for the operations. Before designing the algorithms review and evaluate whether there are any patterns that are applicable.

Object collaboration diagrams define the algorithms with one diagram for each component system operation. Each collaboration graph documents the messages that flow between objects and the data carried by the messages. Object collaboration diagrams are similar to component collaboration diagrams except that all inter-object communication is via *procedure calls*. It should be noted that the algorithm might involve *multi-threading*.

The object collaboration diagrams should satisfy their specification in terms of responsibilities and pre- and post-conditions. The analysis objects and links mentioned in the *reads* and *changes* clauses of the operation specifications indicate the potential design objects involved in the diagram.

Analysis objects may be mapped directly to objects of the corresponding design class. However, they may be mapped to one or more objects from new design classes, making the copied analysis class redundant. Each analysis link may be mapped to an object of a new design class that represents the association, or the link may be represented by attributes of objects involved in the association. Any new classes or attributes are added to the design class diagram.

The object that initially responds to the system operation is called the *controller*, and the others are the *collaborators*. The system operation is added to controller class on the design class diagram, the operations on collaborator objects are added to the appropriate class on the design class diagram.

Object collaboration diagrams may be drawn for operations on collaborator objects. Consequently the design process can be used recursively to layer the design. The object collaboration step is complete when all operations on objects are sufficiently trivial that they may be safely left to the implementation stage.

An object collaboration diagram is the design model corresponding to the code of a method in some class. Consequently the collaboration diagrams should be cross-referenced to the design class diagram. This is particularly important for the documentation of the virtual methods of superclasses and the inherited methods of subclasses.

Each component system operation that has been left *unspecified* must be resolved into either a synchronous or asynchronous operation. The object collaboration diagrams for the alternatives provide a basis for the decision. The decision has to be consistent with the architectural guidelines and the design of all the other components that use this operation. Update the architecture to reflect the decisions.

The object collaboration diagrams should be examined to consider whether it is possible for there to be simultaneous read/write access to a object. If so, the object will need to ensure mutual exclusion on the appropriate operations, for example by using critical regions. If the component is specified as requiring mutual exclusion then each object that appears in more than one object collaboration diagrams should be examined to see if simultaneous access is possible. Simultaneous access can also occur as the result of two threads within a single collaboration diagram passing through the same object.

Use the object collaboration diagrams and the known life cycle of the system to decide which objects must be present when the component start. It is important to develop a collaboration diagram that shows the start-up and initialization procedure for the component.

Guidelines:

Ensure that any design classes imported from the analysis class diagram are still needed— they may have been made redundant.

Consult with the architect and designers of the other components before deciding how to resolve an unspecified system operation.

2.8.3 Object Aggregation And Visibility

Inspect all the object collaboration diagrams. Each message on an object collaboration diagram requires that a visibility reference exists allowing navigation from the client class to the server object. UML distinguishes five kinds of visibility association, parameter, local, global, or self. Decide on the kind of visibility reference and update the analysis class diagram to show the attribute, parameter or variable. Add dependency relationship lines to the design class diagram to indicate non-permanent visibilities. This information can also be shown on the architecture diagram by attaching the appropriate navigability.

Take into account the lifetime of the reference, the lifetime of the visible object, and whether the reference can change once established. Use this information to decide whether aggregation inherited from the analysis phase should be mapped to aggregation by reference or value.

Guidelines:

Check consistency with analysis models. For each association on the analysis class diagram, and that is used in a system operation specification, check that there is a path of visibility for the corresponding classes on the design class diagrams.

Check mutual consistency. Ensure that exclusive target objects are not referenced by more than one class and that shared targets are referenced by more than one class.

2.8.4 Rationalize Design Class Diagram

Search for common objects, common classes, and common behaviors. Consider:

if the objects belonging to a class have been given similar operations, can their operations be unified?

if objects belonging to different classes have similar behavior, can the classes be unified, e.g. by introducing generalizations/specializations of each other or some new class?

Do objects from a class have separable behaviors? If so, should the class be split into separate classes; be turned into an aggregate class; or multiply inherit from several parent classes?

Would plausible changes in the requirements (analysis, architecture) affect several classes? Does this suggest changes to the class structure? Would plausible changes in the class structure make future maintenance easier? If necessary revise the design class diagram, and object collaboration diagrams.

2.8.5 Review Design

Verification of functional effect. Check that the functional effect of each object collaboration diagram satisfies the specification of its system operation given in the operation model.

Meeting timing requirements. Use UML *sequence diagrams* to explore the length and complexity of end-to-end interactions to ensure that the component can meet time-critical requirements, such as throughput.

2.9 Implementation

The final stage of Fusion is mapping the design into an effective implementation. Because most of the global decisions have been made during the architecture and design stages, this transition is relatively straightforward, although some of the issues it raises are subtle. Implementation is organized around components, but components whose design class diagrams share common classes may be able to share target code as well. To begin coding, it is useful to generate a class description view of the design class diagram. The class description view is a summary of the information already present in the data dictionary and the other diagrams, and for each class defines:

The operations from the interactions with their parameters and results.

The data attributes used by the operations of the class.

The parent class(es) of the class. Usually these will include supertypes from the analysis.

The permanent visibility references of that class.

2.9.1 Resource Management Strategy

Consider object lifetimes and how the resources of objects that have become inaccessible are to be reclaimed. The most obvious such resource is storage; other resources include file handles and window descriptors. Decide how resource management is to be done within the component. If the target language has *garbage collection*, this makes store management much easier, but it may not be sufficient to cope with other system resources. Resource management decisions are typically not local to a class, and depend on the target programming language. Thus they should be considered *before* embarking on the rest of the coding activity. Note also that resource consumption may have been one of the quality criteria for the delivered system.

2.9.2 Code Arising From Data Dictionary

Implement any types, predicates, and functions that are present in the data dictionary and used by classes in this component. In languages (such as Java) where functions cannot exist outside classes, allocate one or more design classes to hold those functions. Identify assertions that will affect operations from multiple classes. Decide how these assertions should be reflected in the code.

2.9.3 Code Class Descriptions

(Tool support may make this step automatic.) The class descriptions from the design phase provide the basis for the generation of classes in the component's programming language. Where the implementation language or its libraries provide an existing class suitable to the purpose, that class should be used (subject to performance or maintainability arguments).

Each attribute of the design class becomes a slot in the implementation class. The mutability and sharing properties of that attribute control target language annotations such as **bold** and **private**. Each operation of the design class becomes a method of the target class. Each parent class of a design class defines a parent target class of the target class.

2.9.4 Code Method Bodies

Each method is implemented using the specification provided by its DCD or operation specification. Decisions must be taken about error handling and recovery; these decisions should be across entire components, not per-class. Iterations over collections must respect the DCD semantics. Wherever a method makes changes that might violate an assertion, consider how that change is to be implemented safely.

2.9.5 Performance Analysis

Performance is often one of the quality requirements of a system. Performance cannot be obtained as an afterthought; it must be considered throughout the analysis, design, and implementation process. However, until code is in place, it is difficult to anticipate its performance. Remember that *optimizing rarely-executed code is ineffective*. So when performance is an issue, *profile your system* in as many ways as you can, and plan to make this easy when you start the implementation activity. Isolate the hot spots where performance leaks away, and optimize those.

2.9.6 Code Review

Code is reviewed to establish its correctness and quality, and to anticipate and avoid future maintenance problems. There are two styles of code review:

Inspections. A cost-effective technique for the detection of defects in software. Code is reviewed by teams which the intention of detecting (not correcting; that comes later) possible problems. Object-oriented code is more difficult to review than traditional code, because analysis of the flow of control is complicated by the typically small size of methods, their dispersal among classes, and the use of both static and dynamic polymorphism (which can make it hard to bind a call to its implementation). Object-oriented inspections should also focus on detecting typical flaws in object-oriented systems, e.g., they should ensure that all subclasses implementing a specific method conform to the method specification.

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Testing. A complementary technique to inspections for exposing defects in software. Test cases for Fusion can be driven by use cases.

Applying algebraic properties such as associativity and identity preservation to member function invocation.

Checking the destructors in C++, are consistent with the corresponding constructors.

Ensuring that Java classes which claim non-memory resources are equipped with finalizers.

Checking proper use of initialization.

Checking that casting in C++ is being used in safe ways.

Trying to trigger exception handling capabilities via extreme boundary value inputs.

2.10 Deployment

Enterprise systems will be deployed in accordance with current procedures of the Network Administration Support and the End User Support Teams.

2.11 Training

Depending upon the roles of the users, appropriate training will be conducted.

2.12 Maintenance

Enterprise systems will be maintained throughout the life cycle as necessary. Routine maintenance will be performed without additional documentation. Major enhancements to the system will require additional project documentation.

2.13 Retirement

Upon review, enterprise systems will be retired as necessary according to current IRM procedures.

2.14 Supplementary Processes

2.14.1 GUI Design

Step 1 – Identify GUI Subsystems

Decide whether there is a single user interface, or whether there are groups of actors whose user interface requirements are so distinct that different user interface subsystems are required. For each user interface subsystem, identify the actors, their usability requirements, and use cases. From the use cases, identify what subset of the analysis class diagram these users are concerned with, and use this as a basis for the user's mental model. Decide which application style guide to use.

Step 2 – Design/Prototype Key Scenarios

Select a small number of use case scenarios whose usability is critical to success, either because they are very frequently used or because they are high risk (e.g. high usability requirements, unfamiliar to designers). For each scenario, ask "What views of which objects will provide the user with the information and operations to achieve their goal?" Use paper storyboards to sketch and explore alternative approaches for the scenario with the user. Build software prototypes of any promising approaches. Work with users to exercise these prototypes working through scenarios.

Step 3 – Design/Prototype GUI Structure

Develop an outline GUI design covering the scope of the next planned release (i.e. providing a user interface for the full set of use cases which will be delivered to users in the next delivery increment). This includes windows with views of all the analysis classes visible to the user in the release, and the navigation scheme, and possibly enhancements to the application style guide. It does not include the detailed

information content, layout and interaction mechanisms of each window. Prototype any high risk areas of this outline GUI.

Validate the outline GUI by walking each use case scenario through the outline with users. Optimize the structure to make it more effective for frequent or critical use cases. Having an agreed framework enables detailed functionality to be added one use case at a time during EVO cycles.

Step 4 – Design/Prototype/Build/Test Windows

Design each window in detail. Information content is derived from analysis class attributes and system operation parameters. Layout and style are guided by the application style guide and by usability requirements (e.g. power users need higher information density than novice users). Operations come from the system operations.

Provide interaction mechanisms for all the actions the user needs to perform tasks in the interface, including accelerators and other efficiency devices for frequent users. Where feasible, involve users in validating or prototyping the detailed designs as they evolve. Use the use cases and scenarios to ensure that the GUI supports all variants of user's tasks.

Step 5 – Evaluate Usability

Conduct a full end-user and customer review of the GUI. Include at least one form of usability evaluation. Useful usability evaluation techniques include expert review, collaborative evaluation (where an end-user attempts to perform a use case script and "thinks aloud"), and user satisfaction questionnaires. Assess whether overall usability is acceptable, and the cost-benefit of fixing usability defects identified by usability evaluation.

2.14.2 Database Design

Database design is concerned with meeting requirements for persistence of object state, and for multi-user access. The database design is derived from the Design Class Diagram.

Step 1 – Decide Database Type

Assess the quantity and complexity of persistent data and decide whether a database is required. (Some systems have no persistent data, or have persistent data with a simple structure for which storage in one of more files is adequate.) Requirements for multi-user concurrent access can also influence the need for a database.

If a database is required, decide whether to use an object database or a relational database. Object databases have advantages in terms of their ease of integration with the OO programming environment, their support for complex data structures (such as recursive structures) and complex data types (e.g., multimedia), their high performance with complex data when access patterns are predictable, and their ability to support distributed collaborative work (e.g., long transactions). Relational databases work well for simple data structures and data types, have flexible value-based access, good support for on-line transaction processing (i.e., short transactions), more upward scalability, and a large range of query tools. Further, there are many situations in which a project will be required to use a relational database because a new system must be integrated with an existing database.

Decide which specific DBMS to use, ensuring that the database is compatible with other architectural components and with the OO programming language used. Identify the access mechanisms from the programming environment to the database, and the query language which will be used to retrieve database data.

Step 2 – Map Persistent Classes To Database Schema

For each class and association in the design class diagram, assess whether any properties need to be persistent (i.e., persist from one session to another). Each of these persistent classes and associations is mapped into the database schema.

For object databases, this mapping is very simple. Each class maps to a class, and each association maps to a pair of relationships which are identified as 'inverses' of each other. The database schema is typically defined in the OO programming language (with a few extensions).

For relational databases, a more complex mapping is needed. Each class has to be 'flattened' to fit it into relational tables and into the standard data types which are available for columns. The schema is defined in SQL. Class inheritance cannot be represented directly, so subclasses are either combined into one table, or split into one table per subclass. Pointer-based associations (which are typically pointer-based in the OOP) are mapped into value-based foreign keys. Aggregation structures are either mapped to associations, or collapsed into BLOB columns whose internal structure is not represented in the database. Some tools automate this class model to relational schema mapping.

Step 3 – Design Data Access Mechanisms

Design mechanisms for making a program object into a persistent database object, and for reading an object from the database into program memory.

For object databases, once an object has been declared to be persistent, these mechanisms are provided by the database.

For a relational database, 'saving' an object from memory to the database involves 'flattening' the instance data, and possibly splitting it over several tables. Object pointers must be converted to foreign key values of the associated objects. Retrieving an object involves reassembling the object instance from data in relational tables, possibly joining several tables. Foreign key references are converted to object pointers. Some tools generate this object-to-relational data access code.

Step 4 – Validate and Refine Database Design

The first cut schema and data access design typically use standard heuristics. These ensure that all persistent data is stored and retrieved, but tend to ignore usage profiles. Use the use cases and system operations to identify high volume operations which involve database access. From the quality requirements, identify which operations have critical performance requirements. Examine the data access mechanisms for these high volume and performance-critical operations.

Tune the database to improve performance on these operations. This might be by adding indexes, by defining clustering, by replication of some data, by denormalization, or by modifying the object-relation mappings (and making consequential revisions to the access mechanisms). For example, performance can be improved by merging two or more relational tables to avoid joins. Such optimization may reduce future flexibility.

Step 5 – Design Database Transactions

Decide how the units of processing will be mapped onto database transactions. (Strictly speaking this is not database design, but is considered here as it is related to and dependent on database design). Typically, each Fusion system operation becomes a database transaction. Decide whether there should be any exceptions to this principle, e.g., where the user sees one operation, but the system manages it as two (or more) transactions. (This can be useful to improve performance or robustness).

Decide which class operation(s) should contain the database commands which initiate, commit and rollback each transaction. Check that database transaction scope is compatible with other forms of concurrent processing in the system. Check the scope and duration of database locking implied by the transactions.

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Appendix 1: Project Initiation Request Form

Enterprise IA Methodology Project Initiation Request Form	
Person Requesting	
Date Requested	02/01/99
Description of Problem	
Current Process Description	
Potential Number of Users	
Business Units	
When Required	Justification:

Person Requesting – Person requesting the system.

Date Requested - Current Date

Description of problem - Gather information on the proposed system functionality. For instance what problem are they trying to solve?

Current Process Description - What is the current process that is being performed? Are you collecting information using paper, database, and spreadsheets, other? Does the system already exist?

Number of Potential Users - Understand scope of system. Is it for single user or entire site?

Business Units - What area within FETC is system to be used? Example: Product Management, Finance, or other.

When Required - Date when system is needed and justification of why.

Appendix 2: Interview Guidelines and Questions

Guidelines:

Ask open, unbiased questions
Ask the questions and let them answer
Follow up
Adjust your questions to their previous answers
Ask questions in language they understand
Be flexible
Listen to their complaints, but look for the problem
Pick up on examples

Questions:

What is your role within your organization?
What processes are currently being used to accomplish these tasks?
What problems are you encountering with the current process?
What additional features, do you seek from this system?
What technical requirements for the system? (OS, Platform, compatibility with other systems)
Are there any other people I need to discuss this with?
Can I view any forms or legacy systems that are currently being used?

Appendix 3: System Requirements Specification

This appendix is included to provide an indication of the kind of SRS that Fusion 2.0 requires. The text is taken from *Using Requirements Management to Speed Delivery of Higher Quality Applications*, Alan M. Davis and Dean A. Leffingwell, Rational Software Corporation, 1996
<http://www.rational.com/support/techpapers/696wp/>

Identifying Requirements -How Will I Know One When I See One?

Typically, requirements start out abstractly, e.g., "I need a system that controls elevators." As exploration continues, they become more specific, they split, they recombine in new ways, and example requirements appear (especially when multiple cases exist). Eventually, we arrive at a set of very detailed requirements, e.g., "When the up button is pressed, the light behind that button illuminates within 1 second." Not only do requirements become more detailed, they become less ambiguous requirements begin their lives when first elicited from customers or users. Elicitation may occur using any of a variety of techniques such as interviews, brainstorming, prototyping, questionnaires, quality function deployment techniques, etc. Once captured, it is extremely important to maintain traces from each requirement to its more abstract predecessor requirements and to its more detailed successor requirements. Traceability aids in change management and is a fundamental component of quality assurance and sound requirements management. When the final, most detailed requirements are arrived at, their containing document is called a requirements specification. This specification must be communicated and agreed upon by all relevant parties. It serves as the basis for design (it tells designers what the system is supposed to do) and for test (it tells testers what the system is supposed to do). Good requirements specifications exhibit the following characteristics.

1. *Lack of ambiguity.* It is unlikely your product will satisfy users' needs if a requirement has multiple interpretations.
2. *Completeness.* Although it may be impossible to know all future requirements for a system, you should at least specify all known requirements.
3. *Consistency.* It is impossible to build a system that satisfies all requirements if two requirements are in conflict.
4. *Traces to Origins.* The source of each requirement should be identified. It may have evolved from the refinement of a more abstract requirement, or it may have come from a specific meeting with a target user.
5. *Avoids design.* As long as requirements address external behaviors, as viewed by users or by other interfacing systems, then they are still requirements, regardless of their level of detail. When a requirement attempts to specify the existence of particular subcomponents or their algorithms, it is no longer a requirement and has become design information.
6. *Requirements are enumerated.* Most requirements specifications enhance their readability by including auxiliary types of information that are not requirements per se. This information includes introductory paragraphs or sentences, summary statements, tables, glossaries, and so on. Actual requirements contained in the document should be somehow easily discernible, whether by unique font, identifying label, or other highlighting.

Writing Your SRS - Getting Off to A Good Start

Many important documents exist within your development project: descriptions of user needs, design documents, test plans, etc. But one particular document, the software requirements specification or SRS, is a primary concern of the software developer. The purpose of this document is to define the complete external characteristics of the system to be built. It defines all the behavioral requirements (e.g., this system shall do A when the environment does B) and nonbehavioral requirements (e.g., the system shall have an availability of 99.9%). While standards are by no means a panacea, an organization that adopts a standard for the SRS achieves several benefits:

- The standard serves as a checklist of things to be addressed so nothing is left out,
- It helps readers quickly locate and review requirements, and
- It shortens the learning curve for new requirements writers and other members of the project team.

Numerous software specification standards can be used as a starting point in drafting an SRS. One that provides a good deal of guidance and flexibility is the IEEE/ANSI 830-1993 "IEEE Recommended Practice for Software Requirements Specifications". There are many other standards that can be adopted to suit your needs. A good resource is the compilation by Thayer and Dorfman. They have reprinted 26 different requirements specifications under one cover including national, international, IEEE, ANSI, NASA and U.S. Military standards. What is important is that your document outlines encourage accuracy, consistency and a short learning curve. The ANSI IEEE 830 serves as a good starting point for an SRS. Then, based on usage, you may find it beneficial to modify the standard and turn it into a corporate standard that better matches your company's specific processes and culture.

Selecting Requirements From Your Documents

Requirements documents contain a variety of information that are not actual requirements of the system. For example, introductions, general system descriptions, glossary of terms and other explanatory information. While important to an understanding of the requirements, they do not constitute requirements to be fulfilled by the system. To ease communication of requirements, and allow requirements management, writers should label those portions of text, graphics, or embedded objects that must be implemented and subsequently tested. Ideally, the actual requirements will be left "in situ" (Latin for "in its original place") rather than stored in multiple places. That is, they can be edited and maintained in the project documents even after they have been selected as individual requirements. This makes it easier to keep project documentation up-to-date as requirements change.

Organizing Your Requirements

Whether following a recognized standard or your own, there will be a section devoted to specific requirement descriptions. Let's say we have isolated 500 requirements. Rather than documenting them as a long list of bullets, we should find some way of grouping them to aid in their understanding. We recommend organization by

- mode of operation
- class of user
- object
- feature
- stimulus
- mixing any of the above

Applications that have clearly defined states (powered up, error recovery, etc) could group their requirements under their corresponding mode of operation. Systems that have a significant number of diverse users might be best organized by class of user. For example, a specification for an elevator control system could be organized into three major subsections: passenger, fireperson, and maintenance person. This provides a logical way to group specific requirements so that they can be reviewed and understood by each class of user. Other applications may best be suited to organization by feature—that is, highlighting the features and their intended behaviors as viewed by the user. Yet others, for example an air traffic control system, which is rich in real world objects, may best be organized by grouping the behaviors of objects in the system. This approach may also be well suited to software organizations that have adopted object technology as their development paradigm.

Managing Requirements with Attributes

All requirements have attributes whether we recognize them or not. These attributes are a rich source of management information that can help you plan, communicate and track your project's activities throughout the life-cycle. Each project has unique needs and should therefore select the attributes that are critical to its success. Here is a sample:

Customer Benefit. All requirements are not created equal. Ranking requirements by their relative importance to the end user opens a dialogue with customers, analysts and members of the development team.

Effort. Clearly, some requirements or changes demand more time and resources than others do. Estimating the number person-weeks or lines of code required, for example, is the best way to set expectations of what can or cannot be accomplished in a given time-frame.

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Development Priority. Only after considering a requirement's relative customer benefit, and the effort required to implement it, can the team make feature trade-offs under the twin constraints of a project's schedule and budget. Priority communicates to the entire organization which features will be done first, which features will be implemented if time permits, and which are postponed. Most projects find that categorizing the relative importance of requirements into high, medium and low, or, essential, desirable and optional is sufficient, although finer gradations are certainly possible.

Status. Key decisions and progress should be tracked in one or more status fields. During definition of the project baseline, choices such as Proposed, Approved, and Incorporated are appropriate. As you move into development, In Progress, Implemented, and Validated could be used to track critical project milestones.

Authors. The individuals (or teams) responsible for the requirement should be recorded in the requirements database. This might be the person responsible for entering the text or the person responsible for identifying the need.

Responsible Party. This is the person responsible for ensuring the requirement is satisfied.

Rationale. Requirements exist for specific reasons. This field records an explanation or a reference to an explanation. For example, the reference might be to a page and line number of a product requirement specification, or to a minute marker on a videotape of an important customer interview.

Date. The date a requirement was created or changed should be recorded to document its evolution.

Version of Requirement. As a requirement evolves, it is helpful to identify the version numbers (and history) of requirements changes.

Relationships to Other Requirements. There are many relationships that can be maintained between requirements. For example, attribute fields can record:

1. the more abstract requirement from which this requirement emanated,
2. the more detailed requirement that emanated from this requirement,
3. a requirement of which this requirement is a subset,
4. requirements that are subsets of this requirement,
5. a requirement that must be satisfied before this requirement is satisfied, etc.

It is especially important to maintain linkages from requirements to all development products that emanate downstream from them. By providing these links, one can easily ascertain the impact of any changes, and quickly determine development status (which should be an attribute of those downstream entities).

The above list is not exhaustive. Other common attributes include *Stability, Risk, Security, Safety Release Implemented, Functional Area, etc.* Whatever method is used to track them, attributes should be easily customized to adapt to the unique needs of each team and each application.

References

Davis, A., 201 Principles of Software Development, New York, NY: McGraw Hill, 1995.
Dorfman, M., and R. Thayer, Standards, Guidelines and Examples of System and Software Requirements Engineering, Los Alamitos, CA: IEEE Computer Society, 1991.